

KAST AND RUMPEL

ILLUSTRATIONS OF PATHOLOGICAL ANATOMY

BIRMINGHAM  
MEDICAL  
INSTITUTE

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F 1.—



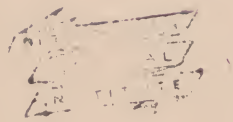
OESOPHAGITIS GASTRITIS DUODENITIS  
CORROSIVAE VENENUM ACIDI SULFURICI  
RECENS HAUSTUM SUBSEQUENTES.

Gezeichnet von W. GUMMELT.





DESTRUCTIO ET CIRRHOSIS CICATRICOSA OESOPHAGI ET VENTRICULI  
(TRES MENSES POST COMBUSTIONEM ACIDI SULFURICI).

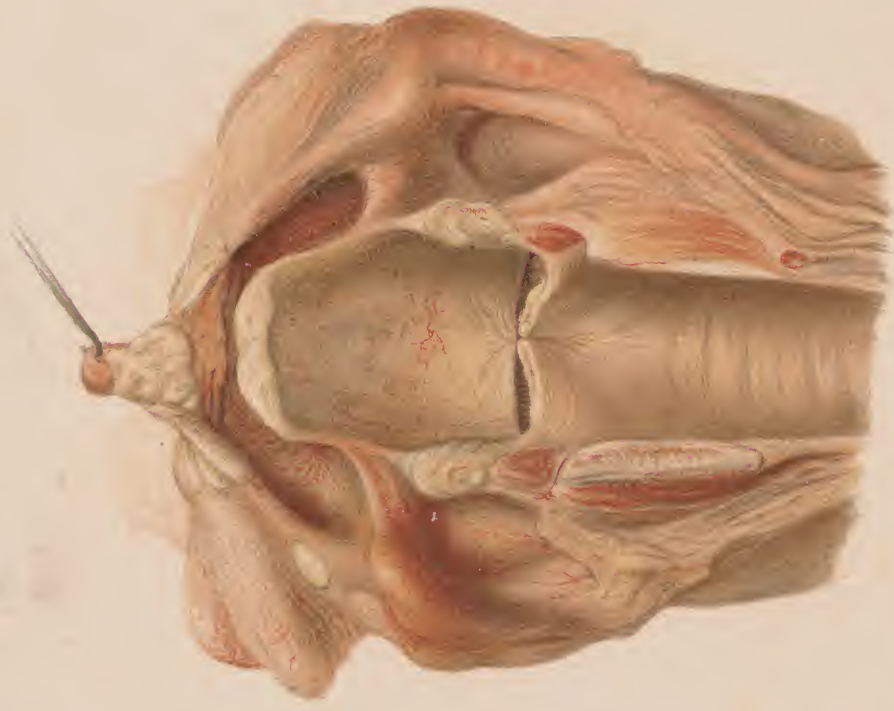


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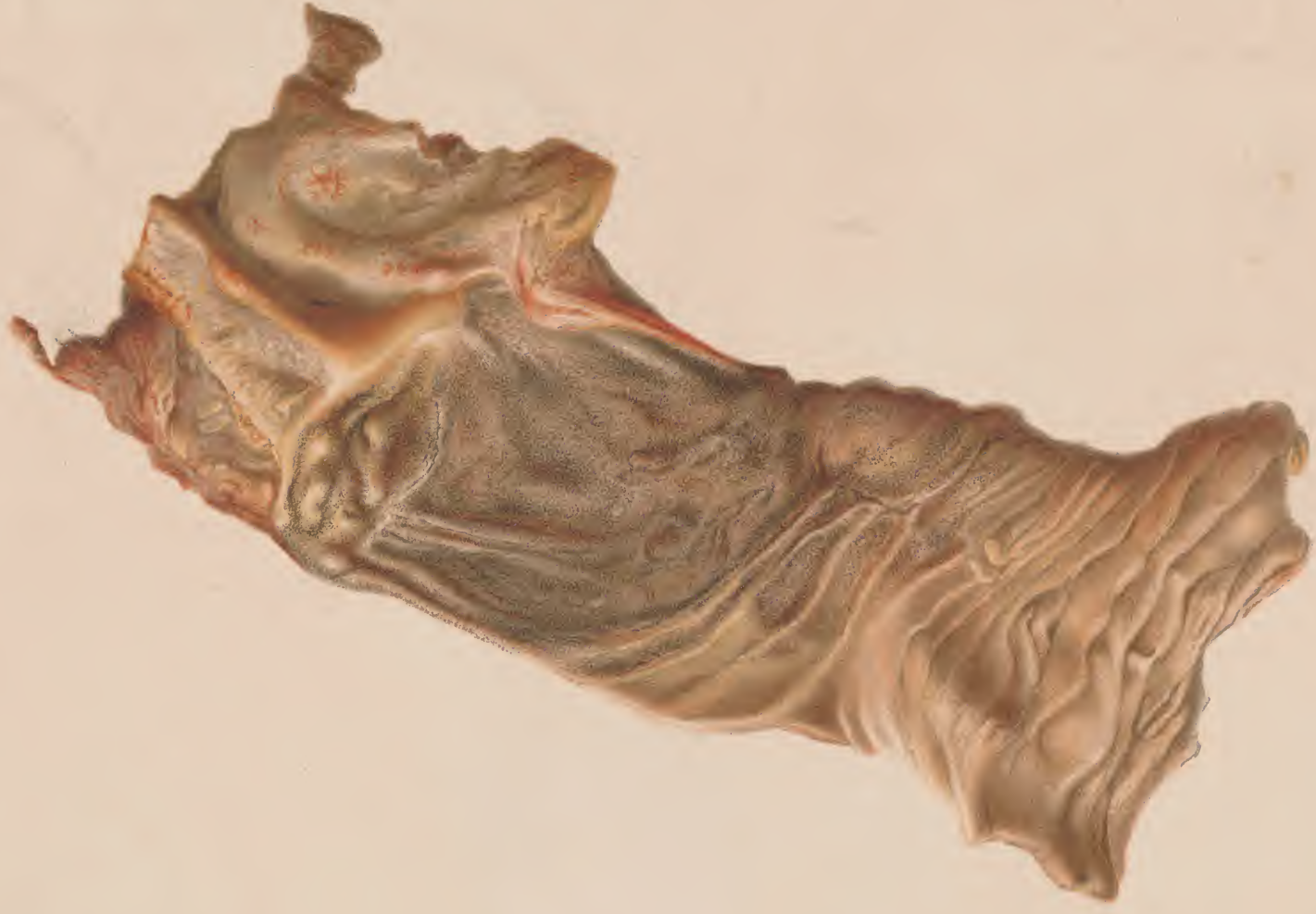


R 2.—

F 3.—



LEPRA LARYNGIS ET PHARYNGIS.



MELANOSIS VILLORUM DUODENI.

Gezeichnet von W. GUMMELT.



R 1.-



VARICES OESOPHAGI IDIOPATHICAE.

S 1.-



STRUMA ACCESSORIA BASOS LINGVAE.

Gezeichnet von W. Gumbert.

Verlag und Chromographie der KUNSTANSTALT (vorm. Gustav W. Seitz) A.-G. WANDSBEK.



# ADVERTISEMENT.

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PART II.

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The patient was still well-nourished and without fever. Physical examination showed advanced disease of the upper lobe of the left lung and incipient disease of the right apex. The pulmonary hæmorrhage resisted all treatment. The patient during a fortnight lost daily 200 ccms. of bright-red, frothy blood, and died with symptoms of extremely profound anæmia on March 3<sup>rd</sup>, 1892. Constant high fever made its appearance during the last nine days of life.

#### Post Mortem.

Left upper lobe of lung almost completely destroyed, and riddled by several smooth-walled cavities, each the size of a pigeon's egg. One of these is in direct communication with one of the larger bronchi, and is filled with fresh blood-clot. After washing this away the sac of an aneurysm as large as a filbert appears, and this opens directly into one of the larger pulmonary vessels. The wall of the aneurysm is very thin, and is in places perforated like a sieve.

The left lower lobe contains recent peribronchial foci of disease and patches of cheesy lobular pneumonia.

The right lung is healthy except for several old tubercular foci in the upper lobe.

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### D. I.

## Chronic Interstitial Inflammation of the Liver and its Capsule.

Swedish sailor, 29 years old. It is not certain whether patient had syphilis in 1887, as all symptoms disappeared after a short period of treatment by inunction. During the last year and a half patient suffered from temporary swelling of legs and body. In February, 1891, his illness got worse during a voyage, and he was treated for ascites in Naples until August and tapped several times. He has been in Hamburg since September, always more or less ill, and was admitted into the hospital on February 18<sup>th</sup>, 1892.

Wasted, worn-looking man, of strong build. Dirty, somewhat jaundiced colouration of skin. Mucous membranes very pale. No œdema.

Temperature 38·6. Pulse 96. Respiration 20. Thoracic organs normal.

Abdomen somewhat full and distended, showing scars of former punctures. Liver dulness increased, extending to one ctm. below costal border. The left lobe especially feels as hard as a board. Spleen very large and easily felt. The presence of fluid in the abdomen cannot be demonstrated with certainty.

Urine free from albumen or sugar. Quantity increased (2,000-3,000 ccms. per diem), of low specific gravity. It contains no bile-pigment. Patient complains of loss of appetite and great weakness, and occasionally of stomach-ache or pains in the head.

During his stay in the hospital patient suffered from constant hectic fever (38 C. 2), and grew gradually worse. The quantity of urine increased at first, but gradually sank, until it averaged 500 ccms. per diem. The urine contained larger quantities of urobilin, and albumen occasionally. In the middle of March ascites set in, which steadily increased. The pains in the body grew worse, whilst occasional diarrhœa weakened the patient still more. The abdomen was tapped in the beginning of April, but this brought but little relief, and the patient died on April 16<sup>th</sup>, 1892, after getting progressively weaker.

#### Post Mortem.

About five litres of reddish clear fluid are found in the abdominal cavity. The coils of intestines which make their appearance when the body is opened are matted together by old adhesions, and adherent to the stomach, liver, and spleen. The capsule of the liver is greatly and equally thickened throughout. It is of an opaque-white colour, and of an extremely hard consistence. Knife grates on section, and broad white tendon-like bands extend in an irregular fashion throughout the liver, and surround more or less extensive islets of liver-parenchyma. The latter is of a homogeneous, yellowish-brown colour, and there is no imbibition of bile-colouring matter anywhere.

Biliary vesicle soft and empty; biliary channels patent. Spleen hypertrophied 16·5 centimetres long, 11 centimetres broad, and 4 centimetres thick. Capsule greatly thickened, and trabeculæ very prominent on section. Kidneys healthy to all naked-eye appearances. Microscopically, circumscribed degenerations of epithelium cells especially in tubuli contorti. No abnormal appearances in other organs.

The microscopical preparation forming the subject of the picture was stained with hæmatoxylin and eosin, and is magnified sixty-two times. The section was made through the capsule.

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### F. IV.

## Gangrene of the Pharynx and of the Naso-pharyngeal Cavity.

This preparation was taken from a child four years old, who suffered from tuberculosis of the glands and lungs, and lay dying for several days. During the last days caries of the lower jaw and ulceration of the tonsils, pharynx, and soft palate set in, but it is doubtful whether this started from some carious teeth. There was no diphtheritic membrane.

#### Post Mortem.

Gangrene of the mucous membrane of the pharynx and nasal-pharyngeal cavities extending partly to the sphenoid bone. Bacteriological examination revealed the presence of streptococci.

The section shown here was made according to the method described by Dr. Hanke.\*

\* Die Sektion der oberen Athmungswege, Beit. Klin. Wochenschrift, 1892. No. 30.



## PART II.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

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### C. I.

#### Aneurysm of the first part of the Aorta.

L., a sailor, 36 years old, was admitted on November 26<sup>th</sup>, 1891. He contracted syphilis in 1875, and was said to have been completely cured. In 1887 he fell from the main-mast and was greatly shaken, whilst three years ago he had an attack of inflammation of the lungs. Nevertheless he was quite healthy up to the beginning of November of last year, and fit for extremely hard work.

On the 15<sup>th</sup> November, 1891, during a sea voyage, he was suddenly seized with extreme dyspnoea and a feeling of oppression; these symptoms having been brought on by a powerful effort. He got better slowly, but on arriving at Hamburg he was seized with a second and worse attack, accompanied with fainting fits, on account of which he was at once admitted into the hospital.

State on admission: Very strong, muscular and wiry man, with a very pale, slightly jaundiced skin. Half-sitting posture, with laborious, quickened and superficial respiration. Temperature 36.9. Pulse 96. Respiration 36. No oedema. No swelling of glands.

Thorax broadly built, elastic, expands well and uniformly. In the precordial region observer notices a strong systolic pulsation, which is communicated to the thoracic wall. The apex-beat is plainly visible in the 5<sup>th</sup> and 6<sup>th</sup> intercostal space, and is distinctly felt in the latter space as far as three fingers' breadth outside the nipple-line. Marked, jerking pulsation of the carotid arteries. Veins of neck not visible, palpation of supra-sternal notch reveals diffuse systolic pulsation. Superficial and deep cardiac dulness increased, the latter beginning at the sternum as high as its articulation with the second rib, and extending as far as  $\frac{1}{2}$  ctm. to the outer side of the right sternal border. On the left side the deep cardiac dulness extends from the junction of the third rib with the sternum downwards and outwards, to one finger's breadth outside the nipple in the 4<sup>th</sup> space, and to two fingers' breadth outside the nipple-line in the region of the apex-beat. No dulness or fremitus on the upper part of the sternum.

Mitral and tricuspid heart-sounds normal. The first sound at the base is very soft and clear, whilst the second sound is replaced by a very loud, long, liquid, almost musical murmur. The second pulmonary sound is not increased in strength.

Pulse is markedly quick. Radial artery somewhat rigid, slightly tortuous. No difference in the pulse of the two subclavian, carotid or radial arteries. The arteries of the retina show marked pulsation. Nothing abnormal found in the lungs. Abdomen full. Liver large and tender on pressure. No hypertrophy of spleen.

Urine, specific gravity 1020-1024, without albumen or sugar. Appetite good. No subjective pains, except feeling of oppression.

The patient slowly improved at first under the influence of dietetic treatment, so that two weeks after admission he could stay out of bed, and was almost without pain when carefully moving about. In the first part of January, 1892, he grew worse altogether, whilst the oppression increased. He became restive, though the symptoms of stasis were slight only. Death on January 15<sup>th</sup>, 1892, with symptoms of extreme aortic insufficiency, which were not influenced at all by drugs. The objective signs had not markedly altered during that time.

#### Post Mortem.

After the removal of the sternum the pericardium is found to be enormously increased in size, and whilst getting narrower towards the base it extends to the level of the first rib. Pericardial fluid markedly increased in quantity. Left ventricle greatly dilated. Muscular substance only slightly hypertrophied and of a brown-red colour. Trabecular and papillary muscles markedly flattened. Endocardium shows an increase in amount of fibrous tissue. It is opaque, with markedly widened vessels and discrete small hæmorrhages. Mitral valve normal. Aortic valves slender and intact, but nevertheless insufficient, owing to the great enlargement of the conus arteriosus.

The abnormal size of the upper part of the pericardium is caused by a strong dilatation of the aorta, beginning at the sinus of Valsalva, and assuming a sack-like shape in its upper portion where it approaches the ascending part. The wall of the aneurysm shows marked endarterial changes. The arch of the aorta, the orifices of the large vessels, and the descending aorta are free of disease. The peripheral arteries are healthy, except for a few arterio-sclerotic changes. The right ventricle, which looks like an appendage of the left merely, is neither hypertrophied nor dilated.

Fair amount of watery effusion in the pleural and abdominal cavities. Lower lobes of lungs show slight hypostatic congestion, but these organs are otherwise normal. Liver shows slight changes due to stasis. Hypertrophy of spleen, the capsule of this organ being distinctly thickened. Kidneys unaltered.

### R. III.

#### Aneurysm of a Branch of the Pulmonary Artery occurring in a case of Tuberculosis.

G., an apprentice, issued of a phthisical family, suffered during the last nine months from pulmonary tuberculosis, the disease following a rapid course. He was admitted on the 17<sup>th</sup> February, 1892, in the New General Hospital, suffering from profuse pulmonary hæmorrhage.



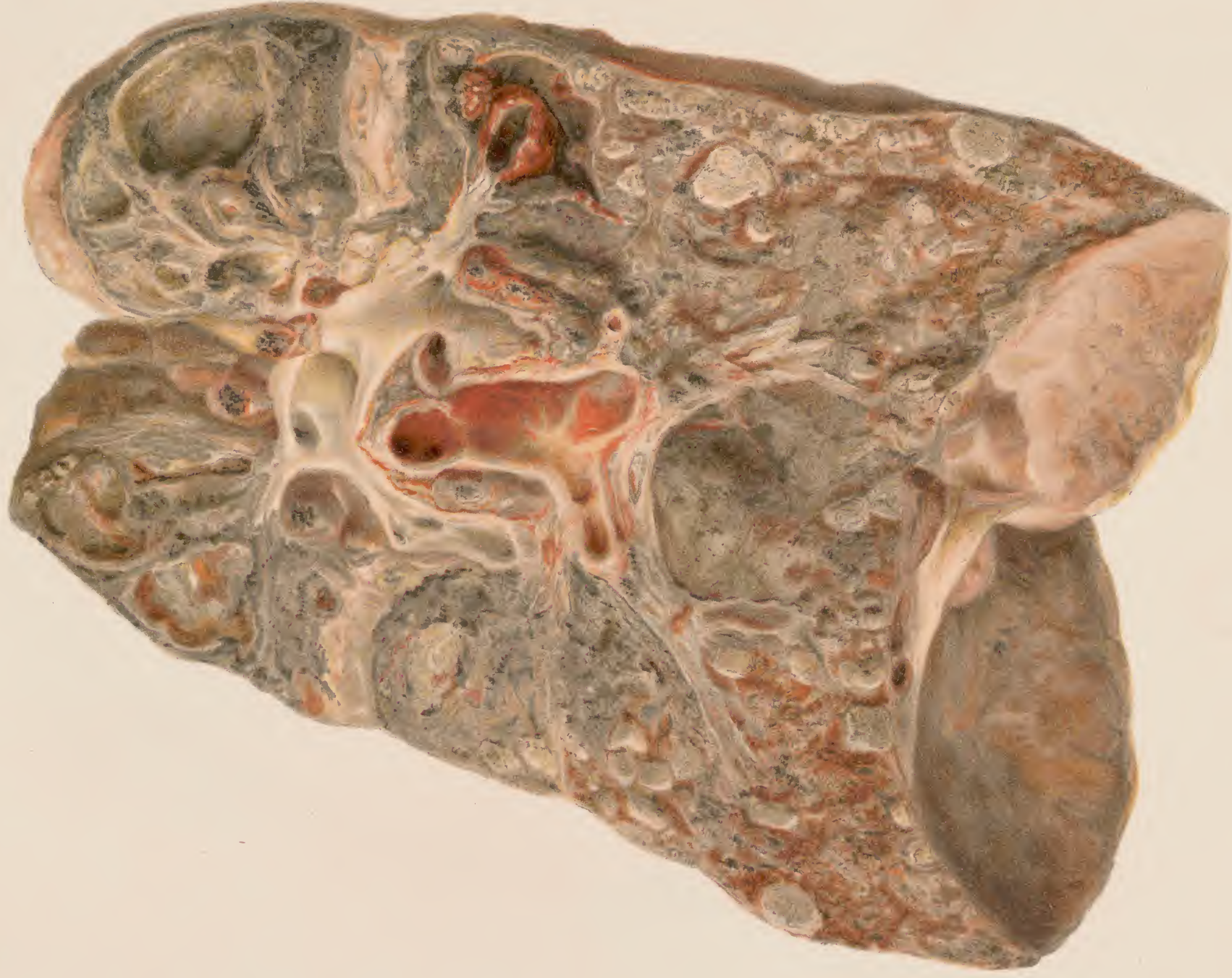
C 1.—



ANEURYSMA AORTAE ASCIDENTIS. INSUFFICIENTIA VALV. AORT. HYPERTROPHIA  
ET DILATATIO PERMAGNA VENTRICULI SINISTRI.

Gezeichnet von W. GUMMELT.



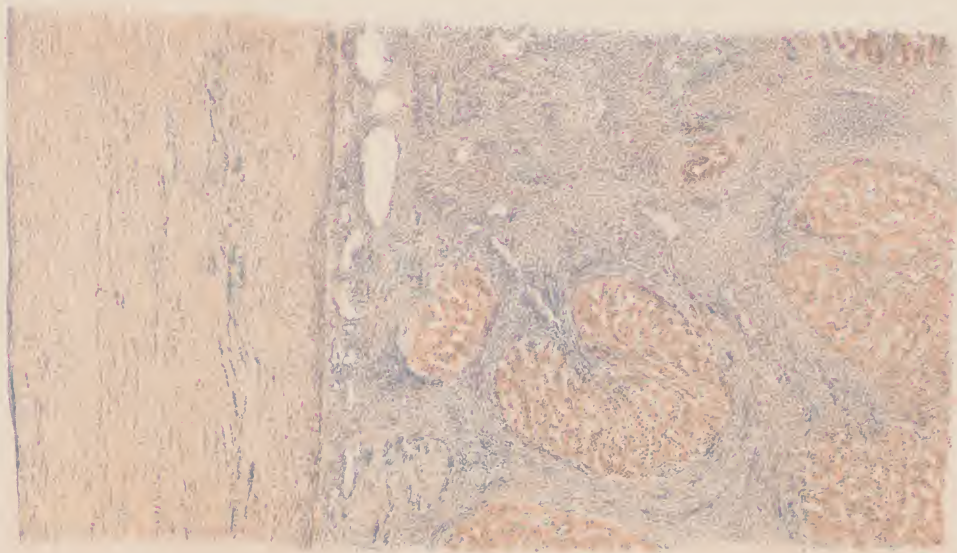


PHTHISIS PULMONUM ULCEROSA.  
ANEURYSMA ARTERIAE PULMONALIS IN CAVERNA LOBI INF.

Gezeichnet von W. GUMMELT.



D 1.—



PERIHEPATITIS ET HEPATITIS INTERSTITIALIS CHRONICA. —

Gezeichnet von W. GUMMELT.

VERLAG UND CHROMOGRAPHIE DER KUNSTANSTALT (FORM. GUSTAV W. SEITZ) A.-G., WANDSBEEK.







GANGRENA PALATI MOLLIS, EPIGLOTTIDIS ET MUCOSAE CAVI PHARYNGO-NASALIS,  
IN CORPUS OSSIS SPHENOIDALIS ET OCCIPITALIS PROGREDIENS. —

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# PART III.

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### F. V.

#### Cancer of the Duodenum.

Female, 71 years old, always healthy previously. She was seized in the middle of December, 1891, with extreme jaundice, which came on without pain. The stools were said to have been whitish from the beginning, whilst the urine was dark brown. The yellow colour of the skin remained equally pronounced for weeks and months, the patient feeling perfectly well and the appetite being extremely good, until at the end of March extreme loss of strength occurred, which increased rapidly. Admission into hospital on April 1<sup>st</sup>, 1892.

Patient old and extremely cachectic, with marked icterus of the skin and mucous membranes. Pulse small, regular, 84 per minute. Respiration, 28 per minute. Temperature, 36.8.

Œdema of hands and feet, emphysema of lungs and diffuse bronchitis. Heart not enlarged, sounds clear. Abdomen distended and tense. Small quantity of fluid can be made out. Liver dulness enlarged, beginning at the sixth rib and extending in the mammary line for eight centimetres below costal border. The organ is smooth throughout; the lower border specially can be sharply defined. Nothing abnormal in region of gall-bladder; no tenderness whatever on pressure. Exact palpation is rendered difficult owing to meteorismus and ascites. No hypertrophy of spleen.

Urine scanty, of blackish-green colour, without albumen or sugar, containing a large quantity of biliary pigment.

Stools of clay colour.

Six days after admission death occurred, the heart gradually becoming weaker, and hydrops becoming general and gradually increasing; death taking place 3½ months after appearance of first symptoms.

#### Autopsy.

A large amount of clear golden-coloured fluid in both pleural cavities and in abdomen. The liver, of an intense green colour, extends below the costal border for a hand's-breadth. After removing this organ, the stomach and the duodenum, a knobby partly-ulcerated tumour, about 3 centimetres in diameter, was found in the region of the papilla. No bile flows into the intestine on pressure applied to the greatly distended gall-bladder, and a sound can only be passed by using some force into the lumen of the duodenum through the obliterated opening of the bile-duct lying in the centre of the tumour. The ductus choledochus, ductus hepaticus and the larger intra-hepatic biliary ducts are also enlarged and filled with bile. After the latter has flowed out, the liver is soft and small, with extremely sharp borders. On section the parenchyma is saturated with biliary pigment, and there is a large amount of connective tissue, especially at the borders. Sections of the other organs show nothing remarkable and nowhere could any metastases be found.

On microscopical examination, the tumour proved to be a cylindrical epithelioma.

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### F. VI.

#### Papillary Carcinoma of the Duodenum.

A merchant, 74 years old, formerly healthy, was taken ill in 1870 with marked icterus and great wasting. Diagnosis of cancer of liver was made by Skoda and Rokitansky. Nevertheless, he gradually recovered and regained his former body-weight. Later on, he suffered once from renal colic and attacks of gout, which recurred of late years.

During the last five years, attacks resembling hepatic colic supervened, taking place at first seldom, then more frequently, and at last almost every fortnight.

Very severe pains on the right side. Icterus, voiding of urine containing biliary pigment, distinct swelling of liver on several occasions, but biliary calculi were never found in the stools.

Three or four days after the appearance of the symptoms, they disappeared.

All therapeutical measures proved useless. Repeated "cures" at Carlsbad undergone without success. Cancer of liver again suspected. On May 7<sup>th</sup>, 1889, a very acute attack with great swelling of the liver, in the course of which a bilateral pleurisy occurred, to which the patient succumbed on May 18<sup>th</sup>, 1889.



### Autopsy.

In the duodenum, in the region of the papilla, the tumour represented here was found. In the intestinal part of the ductus choledochus, similar papillary growths undergoing degeneration were met with. Nothing remarkable was found except the pleurisy already mentioned in the clinical part. No metastases. Microscopical diagnosis of the tumour : Adenoma-carcinoma, cylindro-cellulare papillomatosum.

The singularities of the clinical course may be explained by the pushing aside of the papilla biliaria through the growing tumour, which later on underwent degeneration.

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## F. VII.

### Miliary Tuberculosis of the Peritoneum.

The preparation comes from a man 52 years old. The disease ran its course within three months, with diarrhœa, fever, swelling of the spleen, and increasing ascites.

At the autopsy about 5 litres of sero-sanguineous exuded fluid were found in the abdominal cavity. Peritoneum studded with miliary tubercles and hæmorrhages. Mesenteric glands greatly swollen, calcareous in parts. Spleen soft and enlarged. Several ring-like tuberculous ulcers in the intestines. Encapsuled foci in both apices.

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## K. Ia.

### Marrow of Bone in Pernicious Anæmia.

Marrow of bone coloured dark-red equally, and of a raspberry-colour.

Case of pernicious anæmia, woman 38 years old, marked poikilocytosis. Hæmorrhages into mesentery. Heart-muscle, liver, kidneys show extensive fatty degeneration.

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## K. Ib.

### Bone Marrow in Leukæmia.

Bone marrow of a greyish-white colour. In the upper part only there is an island of normal fat marrow, surrounded with a reddish border.

Case of leukæmia. Woman 60 years old. Relation of red blood corpuscles to white = 4 : 1. Enormous tumour of spleen. No swelling of lymphatic glands.



F 6.—



CARCINOMA PAPILLAE DUODENALIS.

Gezeichnet von W. GUMMELT.





TUBERCULOSIS MILIARIS PERITONEI.

Gezeichnet von W. GUMMELT.





F 5.—



CARCINOMA PAPILLAE DUODENALIS.

Gezeichnet von W. GUMMELT.

VERLAG UND CHROMOGRAPHIE DER KUNSTANSTALT (VORM. GUSTAV W. SEITZ) A.-G. WANDSBEK.



K I.—



$\frac{3}{4}$

MEDULLA OSSIUM RUBRA.



$\frac{3}{4}$

MEDULLA OSSIUM LYMPHADENOIDES.

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## PART IV.

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## F. VIII.

### ASIATIC CHOLERA.

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Case running an extraordinarily rapid course. Death within a few hours after the onset.

A butcher's wife, D., 35 years old, previously quite healthy, was taken ill during the night of the 8<sup>th</sup> of September, after going to bed in apparently perfect health.

The first symptoms made their appearance at three o'clock in the morning, and consisted of vomiting and diarrhoea; immediately afterwards, very painful cramps in the calves, feeling of fear and oppression, and collapse rapidly increasing.

Admitted into Hospital on the 9<sup>th</sup> September, at 7 o'clock in the morning.

Patient is extremely ill, but very strong and well nourished.

Patient pulseless and cold; marked cyanosis of the face; eyes deeply sunk, only half covered by the lids; voice hoarse.

Temperature 35° C.—respiration deep, 30 per minute. Patient lies listlessly, but is fully conscious and gives intelligent answers. She cries out occasionally on account of severe cramps in the calves and forearms, and complains of a great feeling of oppression. Constant belching and vomiting. One thin, painless, rice-water stool. The first sound of the heart only can be heard. Nothing abnormal in the lungs. Abdomen somewhat contracted, not painful. Spleen and liver not enlarged. Bladder empty.

Patient is treated with injections of Camphor, and warm baths at 30° Reaumur—no alteration in her condition.

Immediately after her admission, intravenous injections of .6 per cent. solution of salt warmed to 40° C. Extraordinary momentary result. The pulse comes back, the face again becomes red, the skin feels quite warm, the cramps in the calves and vomiting disappear; subjectively, also, the patient is distinctly better.

One hour afterwards, however, patient's state is just the same as before the injection. The pulse cannot be felt; great collapse; vomiting and cramps.

A second injection of 2000 cc. of salt solution has no effect, the patient dying immediately afterwards, eight hours after the appearance of the first symptoms.

#### Post Mortem examination at 2 o'clock, three hours after death.

Muscles greatly contracted and projecting, marked rigor mortis; forearms flexed.

On opening the body the loops of small intestine which present themselves are of a rose-red colour, with strongly injected vessels, and are in places absolutely filled with a whitish transparent fluid, whilst other parts are collapsed and empty.

The peritoneum is shiny, feels slippery, but is not fibrinous. The contents of the intestine are watery, and the gut full of a thick whitish flocculent material of a homogeneous whitish-grey colour.

The mucous membrane of the small intestine is of pale reddish colour. Solitary follicles moderately swollen; mesenteric glands not swollen; no hypertrophy of the spleen; liver extremely rich in blood; kidneys swollen, substance of cortex opaque; small petechiae in the pelvis of kidneys; bladder empty; organs in the chest show no alterations, except for several hæmorrhages just beneath the pericardium.

## F. IX.

### Intestine of Cholera patient laid open.

The preparation comes from a man, 30 years old, who died on the second day of the disease (no exact history of the case could be obtained).

The contents of the intestine are typical. A particle of the flocculent material contained, rubbed on a cover-glass and stained with 1 per cent. of carbol fuchsine (solution of Ziehl diluted in 9 parts of water), gave the preparation shown here—(Zeiss ocular 6; homogeneous immersion 3 mm; magnification = 500).

The preparation shows a pure culture of cholera bacilli, together with shed epithelium cells.



## F. X.

### Mucous Membrane of Ileum, in a Case of Cholera.

From a girl, 18 years old, who died on the second day of the disease.

Strongly injected loop of intestine from the last part of the ileum.

Peyer's patches and solitary follicles markedly swollen; the intestinal epithelium is desquamated; the contents of the intestines hæmorrhagic.

The microscopical preparation shows the spirillum of Cholera from a bouillon culture 4 days old, stained with a weak solution of carbol fuchsin. (Zeiss ocular 6; homogeneous immersion 3 mm.; magnification = 500.)

## F. XI.

### Diphtheria of Intestine after Cholera.

A locksmith, 40 years old, who had always enjoyed good health previously, fell ill on November 2<sup>nd</sup>, 1892, at 5 o'clock in the morning, after not feeling well the day before.

The illness began with vomiting, strong diarrhoea and cramps in the calves.

He was admitted into the Hospital on November 2<sup>nd</sup>, at 8 o'clock in the morning.

Typical case of Cholera of moderate intensity.

Constitution strong; pulse small, 120 per minute.

Temperature 36.4°; extremities cold, constant vomiting.

About 12 thin rice-water stools in the morning, up to 1 o'clock; no urine. He was ordered injections of camphor and warm baths. In the afternoon, very marked collapse, pulse cannot be felt, intravenous injections of 2 litres of 6 per cent. warm solution.

The patient at once got better, and is fairly well in the evening.

During the night of November 3<sup>rd</sup> he remains calm, but in the morning renewed diarrhoea and vomiting set in; pulse small and frequent, but can be distinctly felt. Patient was again given several hot baths.

*November 4th.* Three hæmorrhagic stools during the night. Opium powders are at once brought up. During the day the patient is treated by injection of camphor and ether and hot baths, but is extremely weak. Temperature 34.6° C.; the pulse can just be felt; 120 per minute.

*November 5th.* In the morning sudden collapse; pulse cannot be felt; intravenous injections of 1½ litres of salt solution. Patient again becomes better and passes urine for the first time, together with a stool. Several stools of a chocolate colour, but no vomiting. No cholera bacilli could any longer be found in the stools by making gelatine plates with them.

In the evening patient is apparently much better.

*November 6th.* Night fairly good; temperature 35.6° C.; pulse fairly strong, 76 per minute. Slight tenderness of the abdomen; in other respects patient feels well, but passes no urine. Towards the evening patient suddenly gets worse. Abdomen far more tender, patient drowsy and delirious during night.

*November 7th.* Complete loss of consciousness; the abdomen somewhat distended; continuous passing of fluid stained brown. Death ensued in the evening at 4 o'clock.

### Post Mortem.

The mucous membrane of the ileum showed in its first third, dirty yellowish-green necrotic foci, which followed the curves of the intestine, were partly confluent and partly separated from each other by healthy tissue. Each, as may be seen in the section, is prolonged to the depth of 1 millimetre into the tissue itself; about one hand's breadth above ilio-cæcal valve this appearance ends, but begins again and is moderately marked in the first part of the large intestine, though it nowhere follows the course of the intestinal folds. The serous membrane of the small intestine shows in many places small ecchymoses in the diseased parts.

The contents of the intestine are no longer of rice-water consistency, but consist of an opaque fluid, staining brownish-red on account of the admixture with blood. No bacilli can any longer be found.



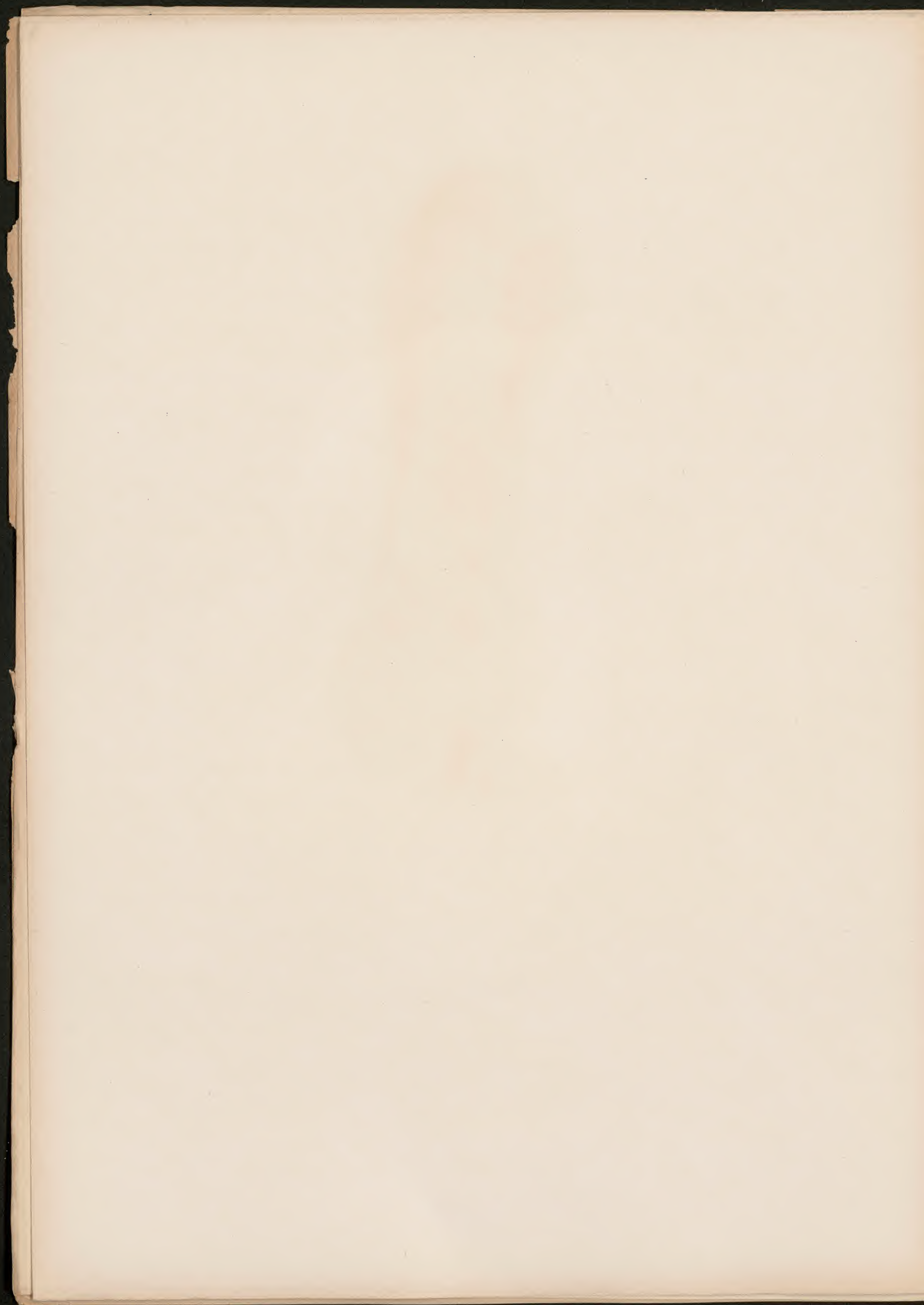


SEROSA INTESTINORUM ET MESENTERIUM.  
(CHOLERA ASIATICA.)

Gezeichnet von W. GUMMELT.

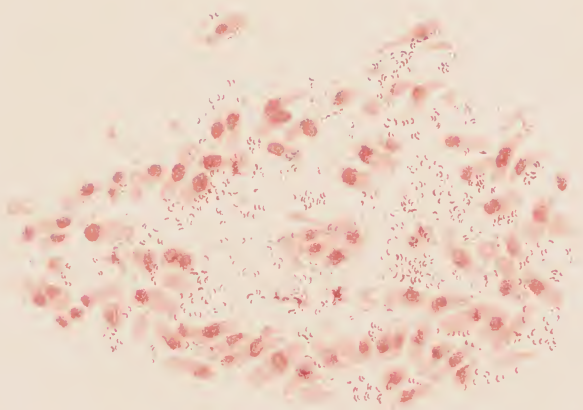
VERLAG UND CHRONOGRAPHIE DER KUNSTANSTALT (VORM. GUSTAV W. SEITZ) A.-G. WANDSBEK







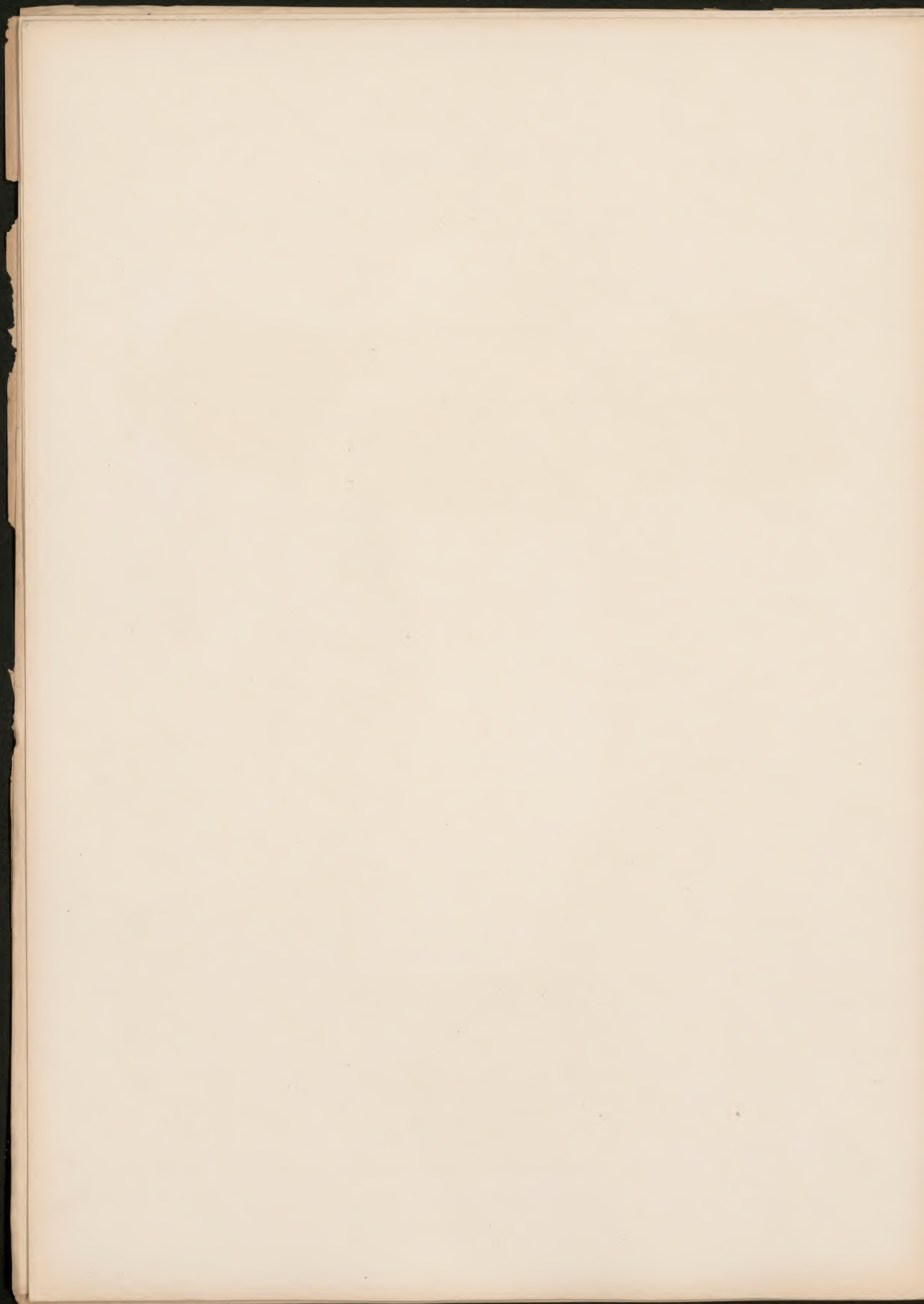
F 9.—



ILEUM CUM CONTENTIS. — BACILLI KOCHII CUM EPITHELIIS EX CONTENTIS.  
(CHOLERA ASIATICA.)

Gezeichnet von W. GUMMELT.





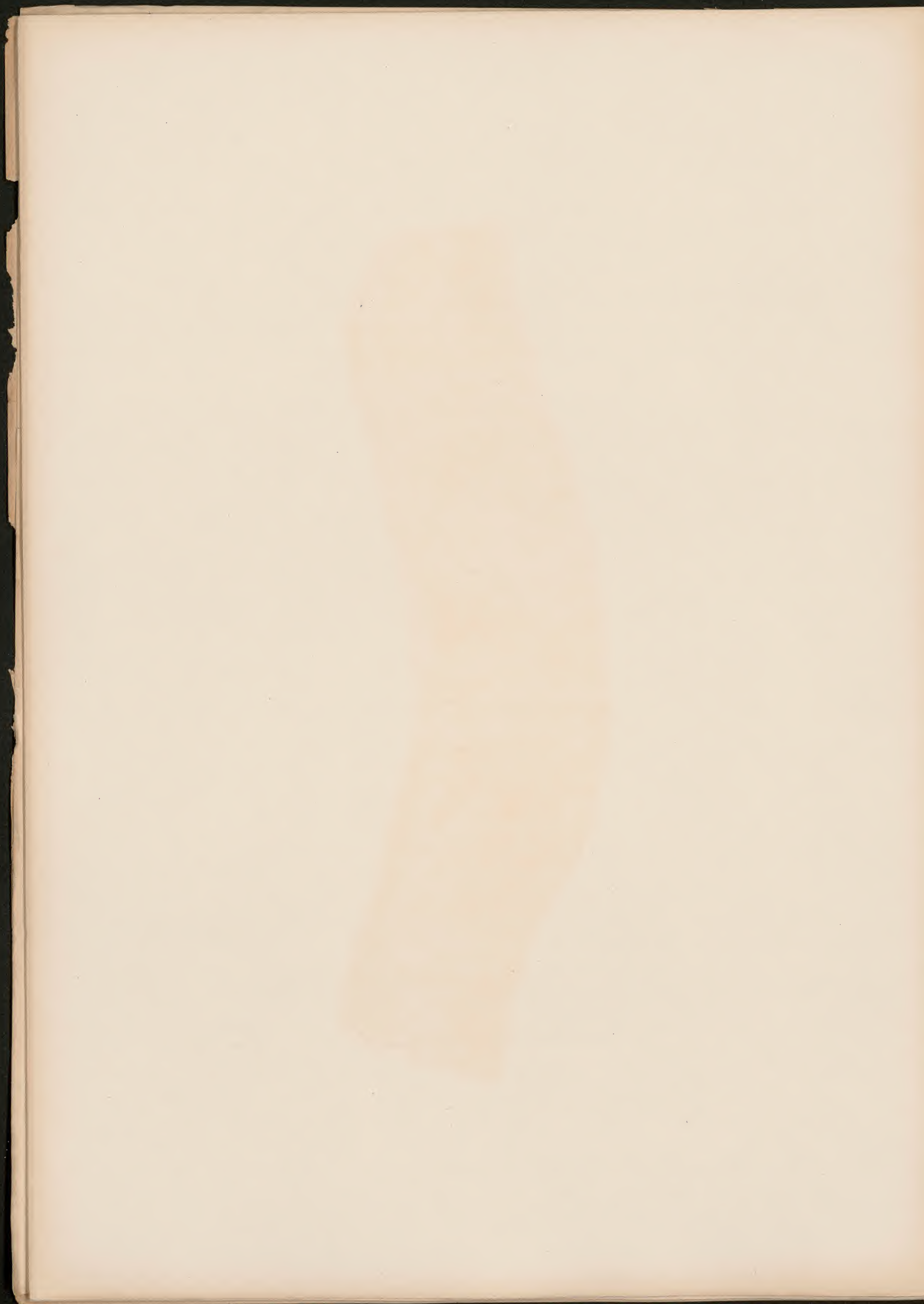




MUCOSA ILEI. — BACILLI KOCHII CUM SPIRILLIS.  
(CHOLERA ASIATICA.)

Gezeichnet von W. GUMMELT.





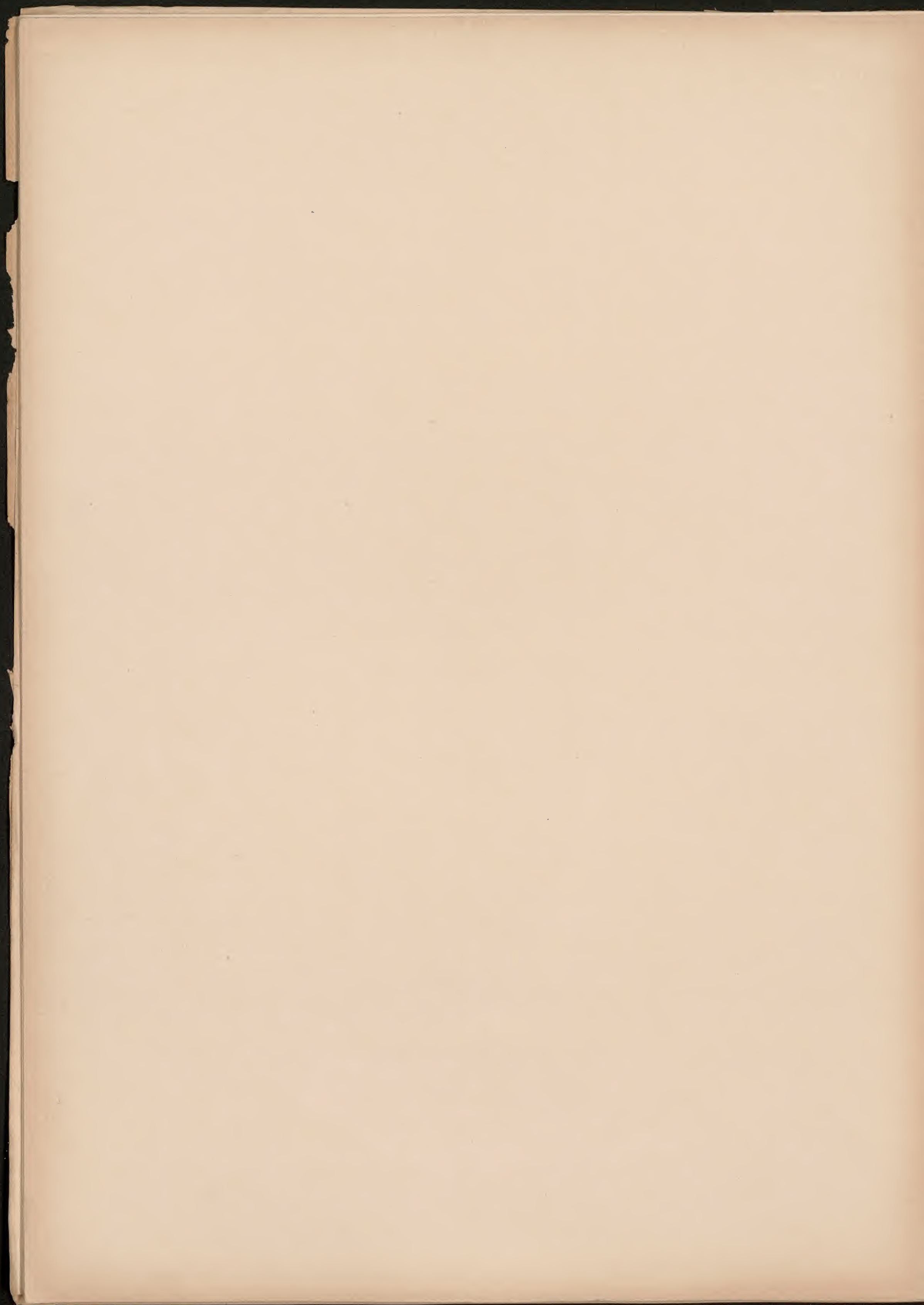




ILEITIS DIPHTHERICA POST CHOLERAM ASIATICAM.

Gezeichnet von W. GUMMELT.

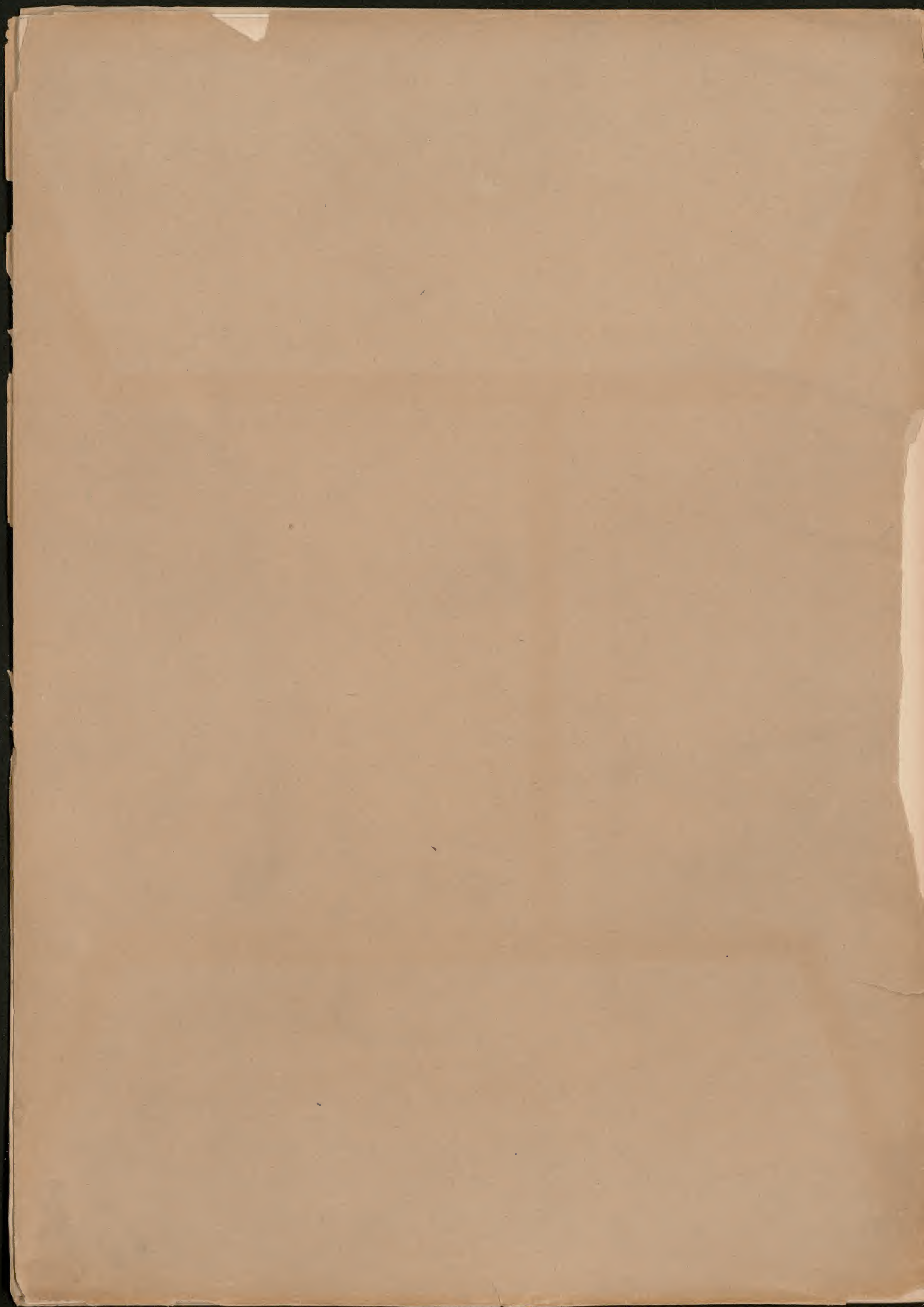














ILLUSTRATIONS  
OF  
PATHOLOGICAL ANATOMY

Being a series of chromographed plates painted from nature  
immediately after death.

With descriptive text by

PROF. D<sup>R.</sup> ALFRED KAST  
Professor of Clinical Medicine, (Breslau)

and

D<sup>R.</sup> THEODOR RUMPEL,  
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English Edition

revised and edited

by

M. ARMAND RUFFER M. D. OXON.

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PART V.

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LONDON:

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## PART V.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

## F. XII.

### Mucous Membrane of the part of the Small Intestine above the Ilio-cæcal Valve in a Cholera patient.

The preparation comes from a boy, 10 years old, who died in the algid state within twenty-four hours of the onset of the disease. It shows extreme swelling of the solitary follicles and Peyer's patches. (This is not often seen in such intensity.) The microscopical drawing represents a section through the small intestine. A gland of Lieberkühn, cut longitudinally, is full of comma bacilli.

The preparation was stained with Löffler's methylene-blue solution. (Zeiss. homog., Immersion 3, Comp. Ocular 8 Magnification = 667.)

## U. I. and U. II.

### The Cholera Kidney.

The kidneys always suffer early in Cholera, and irregularly. The earliest cases met with in our investigations were patients who had died four, five, or nine hours after the beginning of the disease. The kidneys of such patients show no noticeable macroscopical changes, they do not appear to be enlarged; they are greyish-red, and not anæmic. The cortex is not enlarged, whilst the glomeruli are more or less distended. The medullary substance and the kidney labyrinth can be recognised, though not unfrequently these are somewhat opaque.

Microscopically, however, it is possible to demonstrate marked changes in kidneys which are to all appearances intact. Thus, one of the drawings represented here (Figure 2) comes from a patient, 38 years old, who died four hours after the beginning of the illness. The characteristic tissue-change, scattered in patches over the whole organ, is a very marked swelling of the epithelial cells of the tubuli contorti. These are much larger than the normal ones, the part of the cell body turned towards the lumen taking the greatest share in this increase. Other changes may soon be noticed, this part of the protoplasm taking an extremely open, almost sieve-like appearance. The contours of the neighbouring cells disappear, whilst those placed opposite each other approach until they almost touch. The walls of the urinary tubules appear in such places to be separated from each other, whilst the diameter of the tubes is widened. In some places the nucleus has died—as may be proved by its reactions to nuclear dyes.

Sometimes these changes in the nuclei are spread over large areas, and are more marked than the alterations in the protoplasm.

Figure 2 shows in the left lower quarter a segment of a glomerulus, and above this, and nearer to the middle, a section of a tubulus contortus, exhibiting the changes just described, whilst below this a second less swollen tubulus is seen. The other urinary tubules in the field are not markedly changed. (Staining with Hæmatoxylin., Eosin. Zeiss. apochromat., Objectiv 4, Comp. Oc. 4. Magnification = 250.)

In the kidneys of patients who die at the end of the first or second day of the illness, the protoplasm of the cells of the tubuli contorti is altered in the same manner, but the change here, which in the earliest stages appears only in patches, is now spread more diffusely; at the same time, a gradual destruction of the previously-swollen protoplasm takes place. In such kidneys even, there may be no marked macroscopical change. On the other hand, the kidneys coming from patients who died between the second and fourth day of the disease are, for the most part, markedly swollen, and are conspicuous by a noticeable richness in blood, which gives to the section a colour which may be of a saturated dirty red, which is most noticeable near the periphery, and which may assume here an almost livid appearance (Figure 1). In the secreting parenchyma, the dissolving of the protoplasm is much more advanced, so that the previously loosened part turned towards the lumen may now become detached from the nucleated part close to the tunica propria, and may more or less fill the inner part of the urinary tubules for a shorter or longer distance, forming extremely fine granular contents. We call attention also to the presence of cylinders, generally hyaline, but sometimes granular, which may be more or less numerous, and may be found not only in the tubuli contorti, but in the tubes of Henle, and in some straight urinary tubes also.

These cylinders are frequently surrounded by concentric rings of finely granular material which has been formed from the detached protoplasm of the cell.

At this period of the disease one may see necrosis of the nuclei of single epithelial cells.

FIGURE 3. KIDNEY ON THE FOURTH DAY OF THE DISEASE.—The level of the epithelial lining of the urinary tubules is lowered, owing to the part of the cell turned towards the centre having been thrown off. The widened lumen of the same is filled with masses of detritus. Homogeneous cylinders are found in three of the urinary tubules, in the lower field of vision, and another cylinder is seen in a Henle's tube, lying in the right upper quarter. (Staining and magnification as in Figure 2.) The alterations are qualitatively of the same nature in later periods. The process attains its maximum towards the end of the first week of the disease, and sometimes one may find lesions in the kidneys of patients dying on the tenth or fourteenth day identical with those of patients perishing on the second and fourth day. Exceptionally, an exquisite fatty degeneration of single epithelial cells of the tubuli contorti is noticed. These are swollen to an extraordinary degree, though the nucleus remains intact. This appearance was once seen in the kidney of a man, 34 years old, who died on the eleventh day of the disease.

Figure 5 shows marked fatty degeneration of the greatly swollen epithelial cells in most tubuli contorti. Homogeneous cells (?) are seen in a Henle's tube, lying on the right and upper side, while granular masses of detritus are found in sections of the tube, in the same quarter, near the periphery. (Staining and magnification as above.) The microscopical appearance of the cholera kidneys shows, therefore, as may be seen from these remarks, a certain monotony. On the other hand, very noticeable macroscopic changes are found in the kidneys. The colour of the superficial part of the section, red at first, then passes into a more greyish-red or yellowish-red colour, which in many cases gradually gives place to an almost purely yellow colour on the surface of the kidney. In section (Figure 4), the colouring just described is limited altogether to the cortex, whilst the medullary part, even in later stages, keeps its dark-red colour, which then stands



out with special sharpness against the colour of the cortex. The organs in such cases frequently vary in size. The kidneys show, for the most part, marked enlargement, which is accounted for mainly by the increase of the cortex, which is much broader than in the normal organ. Thus, even the macroscopical appearance allows us to judge with some degree of certainty of the length of the disease. Between the second and third week the pathological processes taking place in the secreting epithelium seem to become arrested, and therefore the kidneys of this, and even later stages, show nothing remarkable when examined macroscopically, except a somewhat opaque condition of the cortex, which, microscopically, is hardly more noticeable. With the microscope one may see in such kidneys the remains of granular detritus, single hyaline cylinders, or more granular material in the lumen of the tubuli contorti; whilst the epithelial cells resume again their normal shape, and are provided with the normal high protoplasmic body. We have never noticed any lesion of the circulatory apparatus or interstitial tissue of the kidneys, or of the capsule and glomerulus. The secretion of the urine does not stop during an attack of cholera, even in severe cases. The length of the anuria may be one, six, or more days. The urine which is first passed is, as a rule, albuminous, but the quantity of albumen may only just give rise to a small opalescence. Morphologically such urines contain hyaline and granular cylinders, but not in very large numbers, a few pus-corpuscles, and very few epithelial cells from the kidneys. The albuminuria may last one or several days, but disappears completely as a rule towards the end of the second week. The quantity of urine becomes normal on the days following the attack. It is often increased, and may show, even when the quantity passed is extremely small, a markedly lower specific gravity. The epithelial cells of the urinary tubule are altered whilst the glomeruli remain intact. It is not possible to base a favourable prognosis simply on the state of the secretion of the urine.

## H. I.

### Cholera Exanthemata.

We have observed cholera exanthemata of various kinds in a series of cases. These occurred, as a rule, after the eighth day of the disease, and on the whole gave rise to a favourable prognosis. Some cases had very light transitory skin-eruptions, looking like measles, which attacked some parts of the body only; but transitional stages were found from these to petechial forms which attacked the whole body, and which in one patient, who had gone through a mild attack of cholera outside the hospital, gave grounds for suspecting the exanthema of hæmorrhagic typhus. The cholera exanthemata which we observed, and which we before described as resembling measles or urticaria, looked most like erythema exsudativum multiforme.

The following case, represented on Plate H. I., shows an extremely marked exanthema.

A coachman, K., 29 years old, was admitted, as a typical case of cholera, on the 18th December, 1892, a few hours after the beginning of the first symptoms. The patient recovered from the algid stage, during which intravenous infusion of salt was found to be necessary, but in the course of the next few days he had continuous, marked, sometimes hæmorrhagic, diarrhoea, and very severe vomiting, together with very great general weakness. Gradual improvement occurred on the fifth day of the disease. From the sixth to the eighth day his state was fairly good, and he complained of transitory headaches and extreme fatigue only.

Temperature was always below  $36^{\circ}$ . Pulse quick, easily compressible, about 80. Quantity of urine again normal on the last day, and increased to 2,500 centigrammes even; specific gravity, 1004; contains albumen, with hyaline and granular cylinders in the sediment; no epithelial cells. Two to four thin stools daily, coloured with bile; scanty cultures of bacilli were obtained through the plate process from one of the stools passed on the eighth day of the disease. On the ninth day the following note was taken:

The patient has been very restless during the night, and had light delirium. To-day, in the morning, the face is equally reddened all over, and is covered in certain places with raised patches resembling urticaria. The eyelids are somewhat swollen, the conjunctiva markedly injected. There is a small amount of photophobia. Tongue and lips dry, mucous membrane of the pharynx extremely reddened, but not much swollen. On the hard palate there is a distinct rash, forming dark-red patches, which are not raised. On the neck, and on the upper part of the chest, similar measles-like eruptions, irregularly scattered. Temperature: in the morning,  $36.1^{\circ}$ ; in the evening,  $36.7^{\circ}$ . Urine contains albumen.

Tenth day of the disease. During the night again very restless. The exanthema has spread over the larger part of the trunk and the upper arms. On the chest it has the appearance of irregularly-formed raised patches, which are partly wavy. The periphery of these older patches is often intensely reddened and more swollen; while the middle parts are already paler and have collapsed. In the middle of many there is a distinct dark-red hæmorrhage, the colour often passing into blue, so that some have the appearance of a cockade. In the very red area there is a middle zone which is paler, with a dark-blue centre. Between these larger patches one may also find smaller measles-like patches, which are most numerous in the places in which the exanthema is spreading. The back is covered with a regular, extremely dark, scarlet-feverlike redness, which contains several bluish-red hæmorrhages from the size of a lentil to that of a bean. The parts of the skin affected by the exanthema are not tender, either spontaneously or on pressure. There is no itching of the skin or swelling of glands. The patient feels on the whole extremely uncomfortable, and throws himself from side to side of his bed; vomiting once; thin stools; urine, specific gravity, 1010; contains albumen. Temperature: in the morning,  $39.2^{\circ}$ ; in the evening,  $38.1^{\circ}$ .

Eleventh day of the disease. The exanthema has spread in the manner described above, over the whole body. General state not changed. No urine, no stool. Temperature: in the morning,  $37.6^{\circ}$ ; in the evening,  $38.2^{\circ}$ .

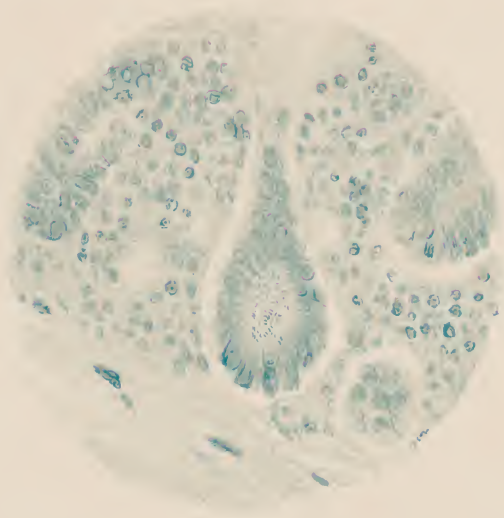
Twelfth day of the disease. The exanthema becomes paler, taking a yellowish-brown colour. At the places which were first affected only the wavy borders are visible. In the face there is a distinct desquamation. Neither urine nor stool, as on the day before. Temperature: morning,  $37.9^{\circ}$ ; evening,  $37.6^{\circ}$ .

Thirteenth day of the disease. The exanthema has almost completely disappeared, giving place to an increased desquamation. General state better. Urine, 200 ccs.; specific gravity, 1015. Large amount of albumen. Numerous hyaline cylinders. In the stool following an enema, comma bacilli were proved to be present by plate-cultures. Temperature: in the morning,  $36.9^{\circ}$ ; in the evening,  $37.1^{\circ}$ . After three days the patient becomes feverish and is attacked with double pneumonia of the lower lobes, from which he died the day after; that is, on the seventeenth day of the disease.

### Post-mortem Examination.

Old obliterations of the pleura, and patches of confluent broncho-pneumonia of both lower lobes of the lungs. Kidneys not changed macroscopically; microscopically only slight degeneration of the epithelial cells. Lumen of the urinary tubules empty. The mucous membrane of the intestine is intact, except for a few scattered hæmorrhages in the colon. In the mucoid contents of the intestine comma bacilli were shown to be present by plate-cultures.





AMINGDOR  
MEDICAL  
INSTITUTE

MUCOSA ILEI. (CHOLERA ASIATICA.)

BACILLI KOCHII IN FUNDO GLANDULAE LIEBERKÜHNII.

Gezeichnet von W. GUMMELT.

VERLAG UND CHROMOGRAPHIE DER KUNSTANSTALT (FORM. GUSTAV W. SEITZ) A.-G. WANDSBEK.









FIG. I.

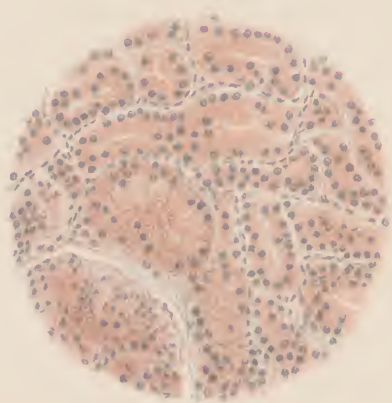


FIG. II.

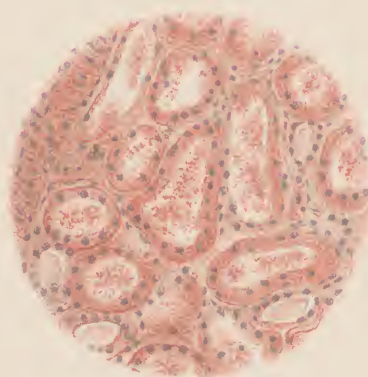
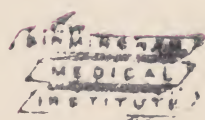


FIG. III.

DEGENERATIO RENUM PARENCHYMATOSA RECENS.  
(CHOLERA ASIATICA.)



Gezeichnet von W. GUMMELT.









FIG. IV.

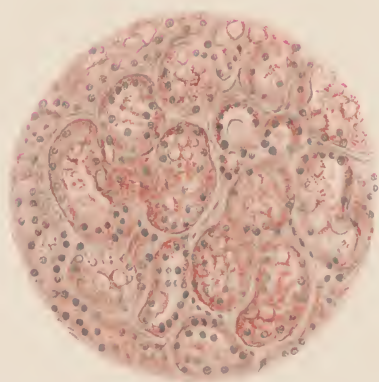


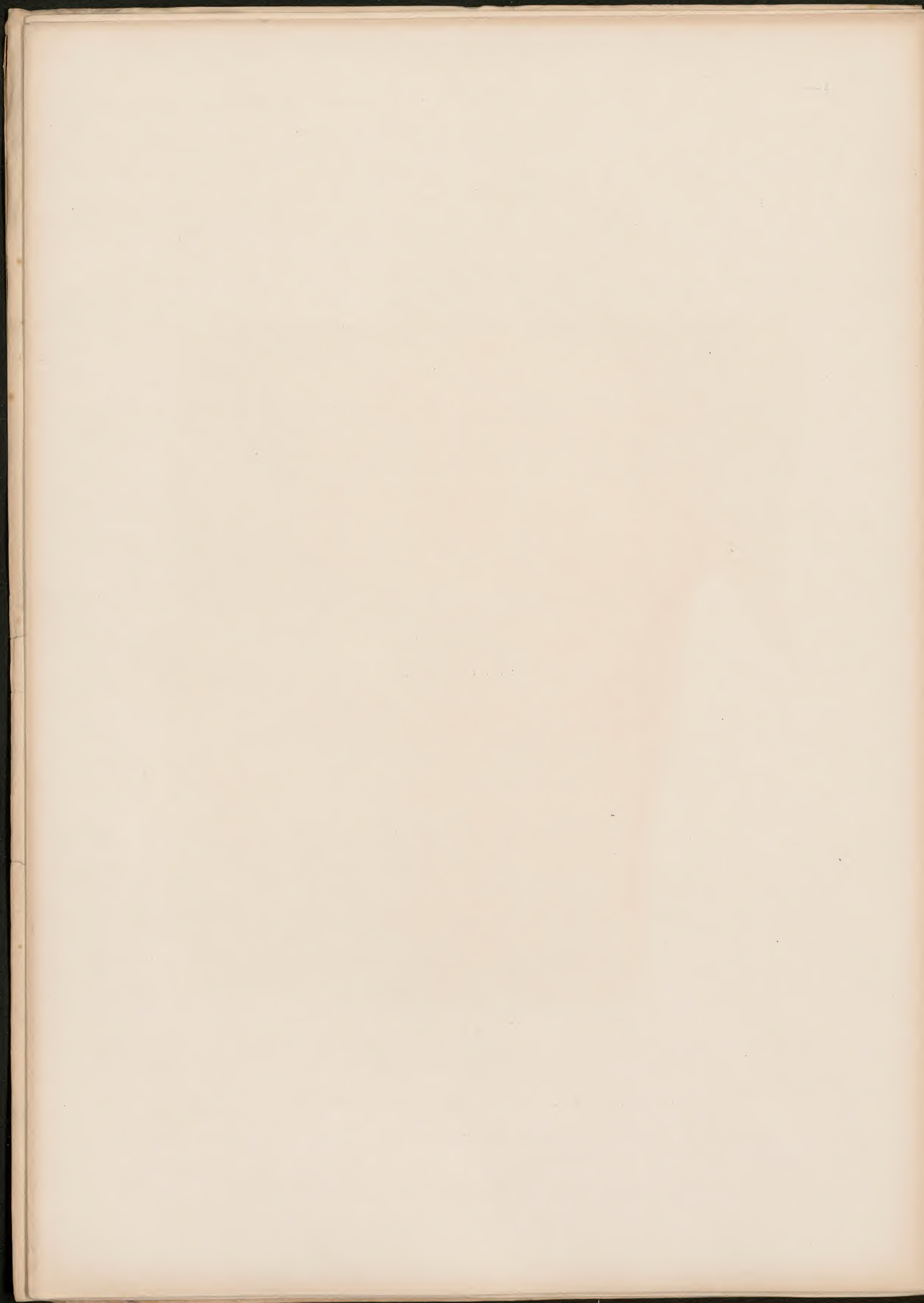
FIG. V.

DEGENERATIO RENUM PARENCHYMATOSA PROGRESSA.  
(CHOLERA ASIATICA.)

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H 1.—



EXANTHEMA CHOLERAE ASIATICAE.

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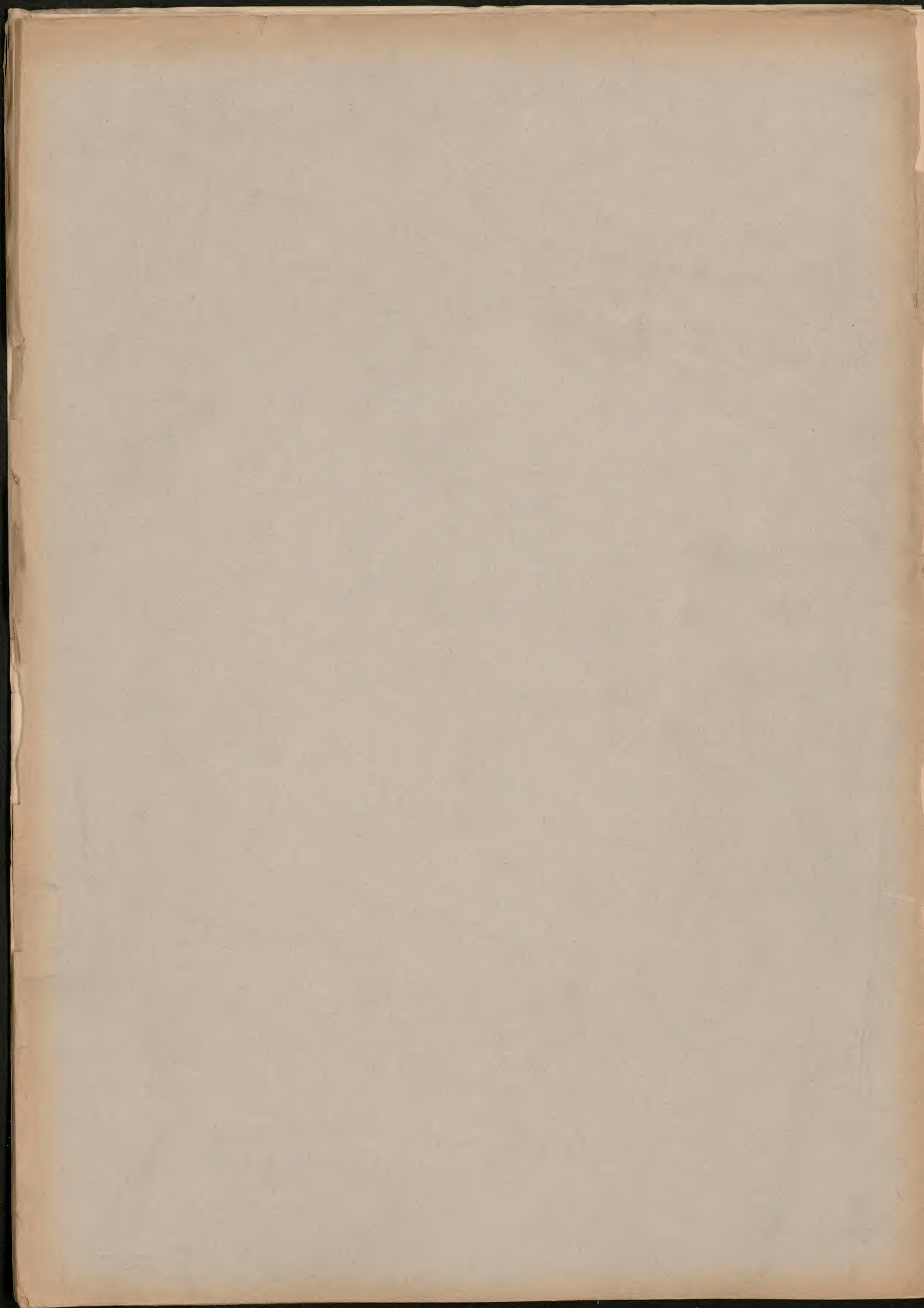














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## PART VI.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

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### D. II.

### Cirrhosis of the Liver.

Rapid course, beginning with enlargement of the liver, with marked jaundice and hæmorrhage of the skin.

An innkeeper, aged 59, and a confirmed drunkard, had gone through an attack of D.T. two years previously, but had otherwise been always in good health, was admitted on 17<sup>th</sup> May, 1892, into the new General Hospital suffering from a fresh attack of delirium, which had broken out after 14 days' general illness. Although a very strong man, there was a considerable swelling of the liver and slight jaundice. Thorough investigation was rendered impossible owing to the restlessness of the patient, which necessitated seclusion next day in a padded cell, the patient subsequently becoming quieter.

Present state, taken on June 20<sup>th</sup>:

Pronounced jaundice of the skin and mucous membranes; several little hæmorrhages in various parts of the body. No œdema.

Temperature 37.1°. Pulse 96.

No visible change in the chest organs, except a trifling enlargement of the heart on the right side. Abdomen greatly distended. Ascites, however, cannot be demonstrated. Liver very much enlarged, extending for three fingers' breadth below the costal border. Congestion of the liver beginning above the fifth rib. Large perceptible hypertrophy of the spleen. Urine small in quantity, albuminous, of red-brown colour. It contains much urobilin, but not any colouring matter of bile. Stool coloured with bile. During the following days the jaundice became still more marked and painful, and meteorismus concealed the outline of the liver. Ascites appeared, which was clearly perceptible on May 26<sup>th</sup> already. At the same time œdema occurred on the lower extremities.

The amount of urine meanwhile diminished from 500 to 700 cb. cms. It was free from albumen, containing occasional traces of biliary colouring matter and as a rule a large quantity of urobilin.

The rapidly increasing ascites rendered tapping of the abdomen necessary on the 9<sup>th</sup> of June; this puncture yielded 5,800 cb. cms. of clear yellow-greenish liquid with a specific gravity of 1006. After the puncture the liver could again be clearly felt. It reached below the costal border in the mammary line, while the dulness of the upper edge of the liver began in the third intercostal space already.

After the puncture the patient at first felt somewhat better; did not recover, however, but declined visibly more and more.

Slight hæmorrhages occasionally occurred, which varied from the size of a pin's head to that of a lentil. These were soon reabsorbed, but occasionally hæmorrhages from the gums were also noticed. Jaundice was always present, but varied in intensity. The ascites again slowly increased. A second puncture on the 27<sup>th</sup> June yielded 1,700 cb. cm. of clear but hæmorrhagic liquid.

Liver dulness after tapping reached upwards in the mammary line to the upper edge of the fifth rib, and downwards almost to the costal border. The lower border of the liver very hard and uneven. During the next week the psychical condition of the patient was particularly remarkable. Whilst not fully conscious after the delirium, he was greatly agitated, this excitement being accompanied by ideas of terror and persecution, this condition later on passing into a lasting condition of complete dulness and partial idiocy. Finally the patient lay stupefied, with loss of control over bladder and intestines. Meanwhile the bodily decline increased rapidly. On two occasions fever occurred, rising to 39° C., lasting several days without any apparent cause. This weakened the patient still more; œdemas arose in various parts of the body; the ascites also increased and rendered a third puncture necessary. On July 19, 7,000 cb. cms. of liquid stained with blood was once more drawn off. The liver, immediately after the puncture, was no longer to be felt below the costal border.

Two days afterwards death followed, on the 65<sup>th</sup> day after admission into the hospital, and the 80<sup>th</sup> day of illness.

#### Post-mortem.

Body of an emaciated, strongly-jaundiced man. Numerous subcutaneous hæmorrhages on the skin of the trunk and forehead, also in the adipose tissue and the muscles of the stomach. Heart and vascular system without peculiarities. Patches of broncho-pneumonia in both lungs.

4,000 cb. cms. of a muddy, very hæmorrhagic fluid in the abdominal cavity; coils of the intestine matted together by fresh lymph.

Liver diminished 20.3 centimetres in length, 19.0 centimetres in breadth, 7.2 centimetres in thickness. Weight 1,335 grs. The surfaces roughly uneven; a few protuberant nodules varying in size from a pea to a cherry, and in colour between yellow-brown to yellow-green and very dark green. Liver extraordinarily hard, grating on section. Section shows large connective-tissue tracts surrounding the variously coloured lobuli. The gall-bladder is connected by old adhesions with the porta hepatis and the duodenum, and contains but little bile, which is thick and dark brown. Cystic hepatic and common bile-ducts are patent.

Spleen tough, greatly enlarged, 17.5 centimetres in length, 10.8 centimetres in breadth, 4.5 centimetres in thickness, of a dark-brown or red colour, with distinctly marked trabeculæ.

Kidneys of ordinary size, capsule easily removable, surface smooth. Cortex not smaller than natural. Several uric acid infarcts



in the pyramids. The other organs present no microscopic changes (compare drawing below), but the liver shows a fairly even proliferation of connective tissue between the acini, which are diminished in size. Very numerous, newly formed, atypically multiplying biliary ducts are found in the rough tracts of connective tissue. In the fresh section made with a double knife, the liver cells have partly undergone fatty degeneration, and are partly filled with yellowish-brown pigment.

---

## K. II.

### Periosteal Sarcoma of the Humerus. Metastases in Femur.

The preparation comes from a young girl, 18 years old, who four weeks before admission began to suffer from a painful swelling of the right humerus. Exarticulation of the right humerus.

A tumour of brain-like consistence was found, which completely surrounded the bone, and starting from the periosteum, involved the middle of the humerus. On section with a saw, the humerus, which had retained its shape, passed through the masses of the tumour, forming a spindle-like swelling at the diseased spot. The periosteum was broken through at one spot, and the marrow was filled, in the region of the periosteal tumour-formation, by parts of the growth, which in places were undergoing retrogressive degeneration. Microscopically the tumour proved to be a medullary sarcoma, the cells of which were of medium size and contained small fatty globules. The patient died half a year after the operation from local metastases of the chest-wall and lungs, which appeared shortly after the operation. At the post-mortem numerous small sarcomatous metastases were found on the femur, as depicted on the plate.

---

## K. III.

### Medullary Sarcoma of the Tibia.

A man, 27 years old, had been suffering for nine months from pains and increasing swelling of the right leg just below the knee.

Tumour of the size of a child's head distending the upper end of the tibia, and which had grown particularly towards the back, and the popliteal space. Amputation of the femur. Towards the outer side of the head of the tibia there is a tumour somewhat larger than the fist. Section showed that it started from the bone marrow, and has destroyed the bone to a great extent, almost to the knee-joint, and has driven the periosteum in front of it. In the tumour one finds small cavities partly filled with hæmorrhages. Microscopically, giant-celled sarcoma.

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## F. XIII.

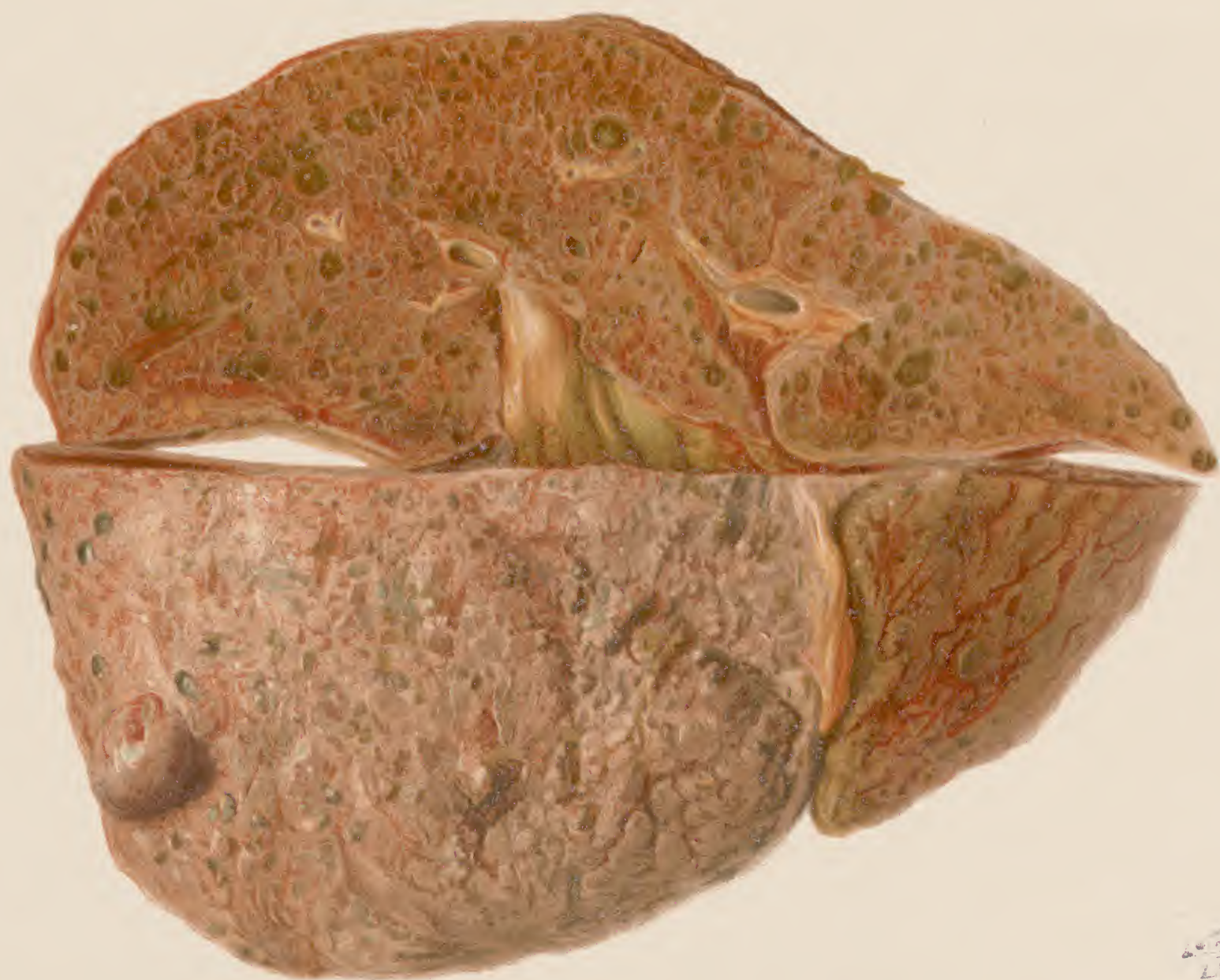
### Sarcomatous Metastases in the Intestines.

The preparation comes from a woman, 56 years old, who was admitted a few days before death, with paralysis of the lower extremities and a large bed sore in consequence of myelitis. Symptoms pointing to disease of the intestine were said to have been absent during life. The primary tumour in the abdomen was found to be a large glandular sarcoma, which was firmly adherent to the vertebral column. In the ileum were two large, superficially ulcerated, flat tumours about the size of a two-shilling piece, which on section showed a homogeneous, grayish-white bacon-like surface. Besides these two larger tumours, there were five smaller ones, the mucous surface of which was intact. Microscopical examination showed that the masses of tumour penetrated through the mucous membrane and the muscularis mucosæ down to the submucosa, whilst the muscular layer and the serous membrane were found free from tumour elements in these places. The tissue elements of the intestinal wall had completely disappeared in the region of the metastases. The part of the tumour turned towards the lumen of the intestine was necrosed for the space of about 1 mm.

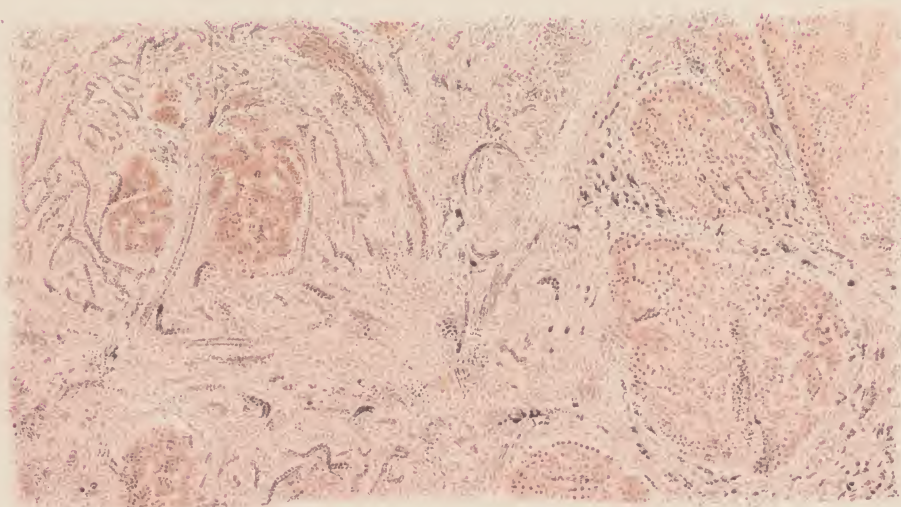
Microscopically the tumour proves to be a sarcoma very rich in cells, and containing only a few vessels showing the structure of capillaries, with a delicately-fibrillated ground substance.



D 2.—



W. Gummelt  
1898  
Lith. G. H. W. Seitz  
Wandsbek



# CIRRHOSIS HEPATIS.

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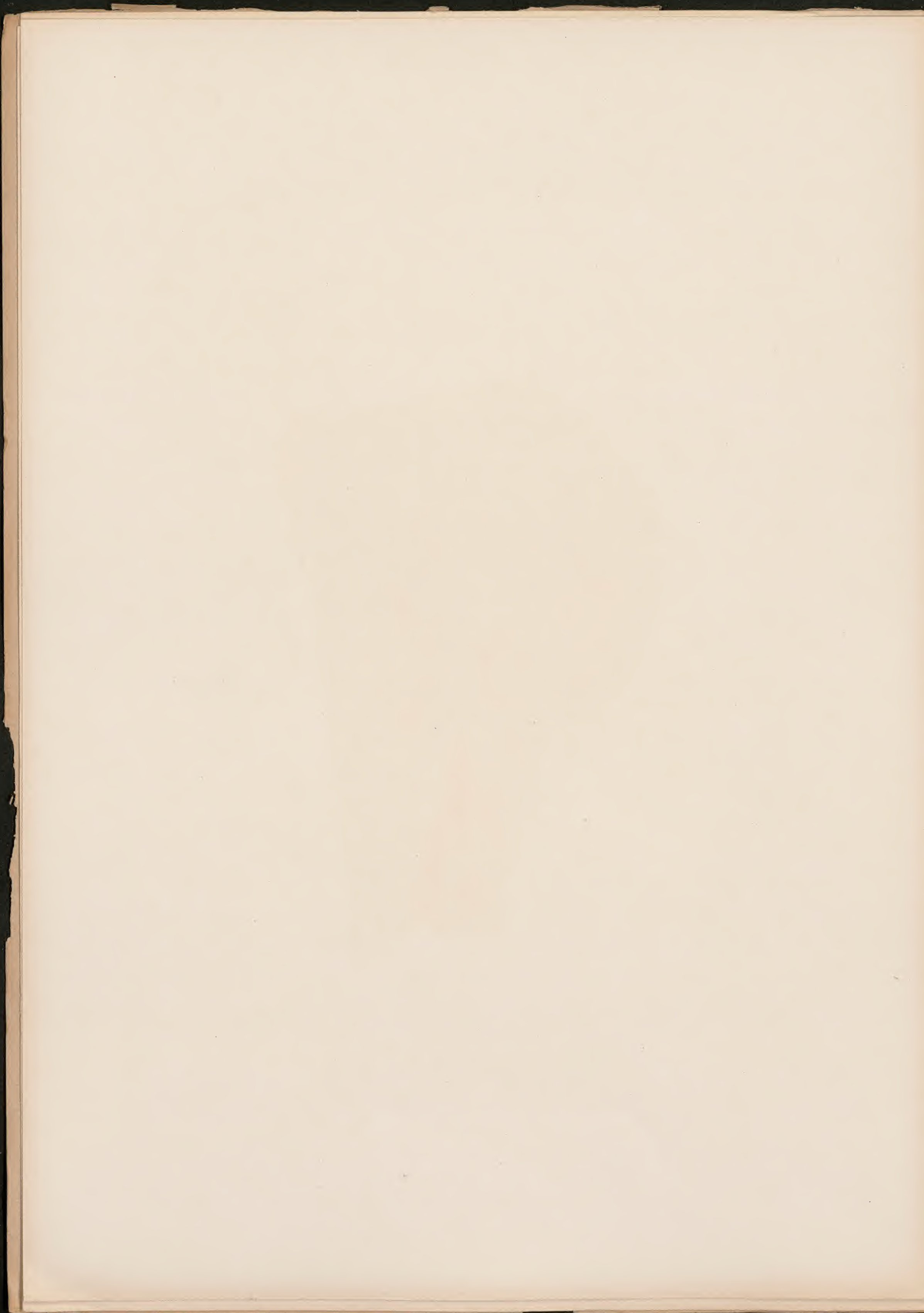


SARCOMA MEDULLARE HUMERI PERIOSTALE.

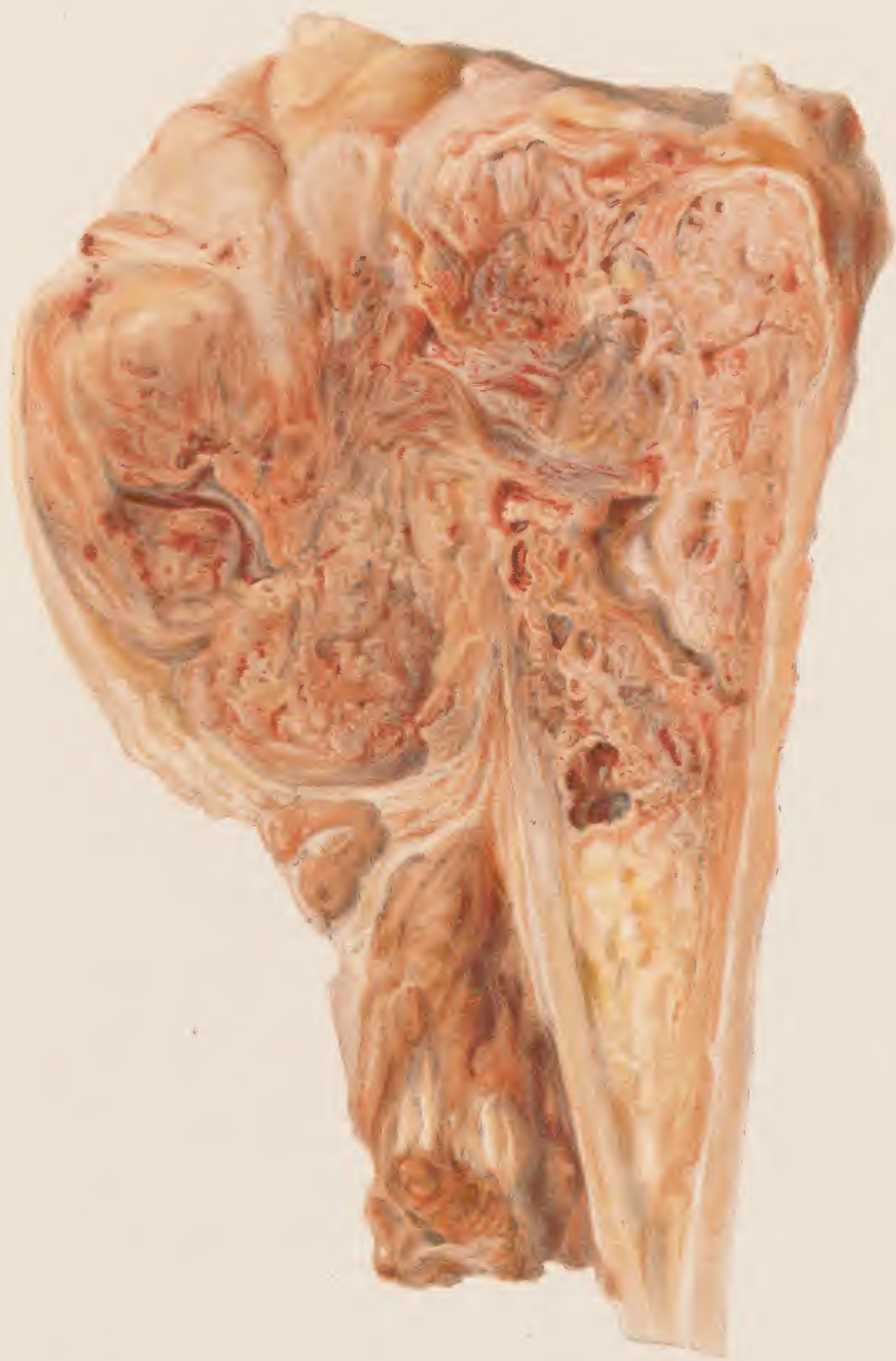
METASTASES SARCOMATOSAE FEMARIS.

Gezeichnet von W. GUMMELT.







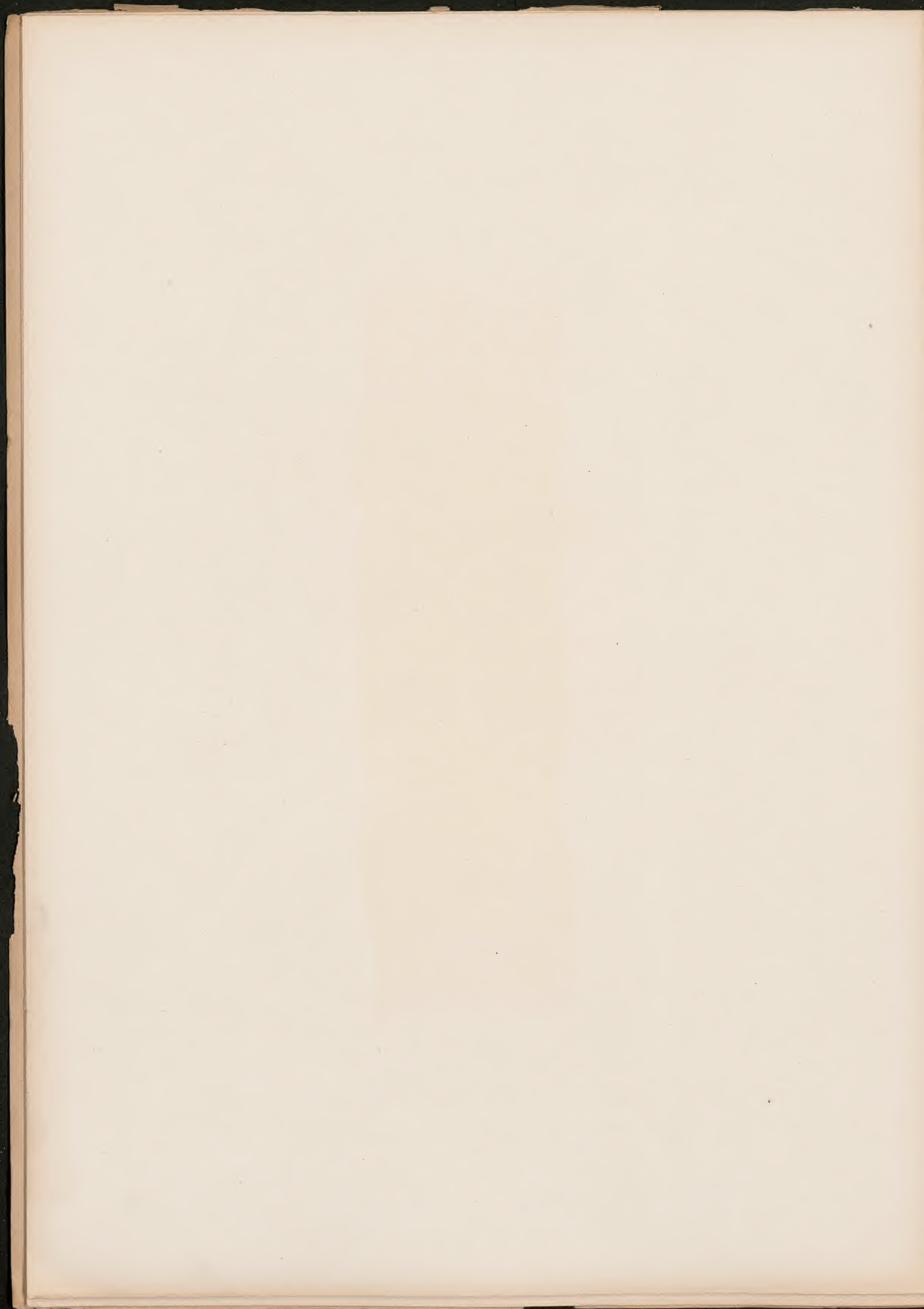


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SARCOMA MEDULLARE TIBIAE MYELOGENES.

Gezeichnet von W. GUMMELT. \*







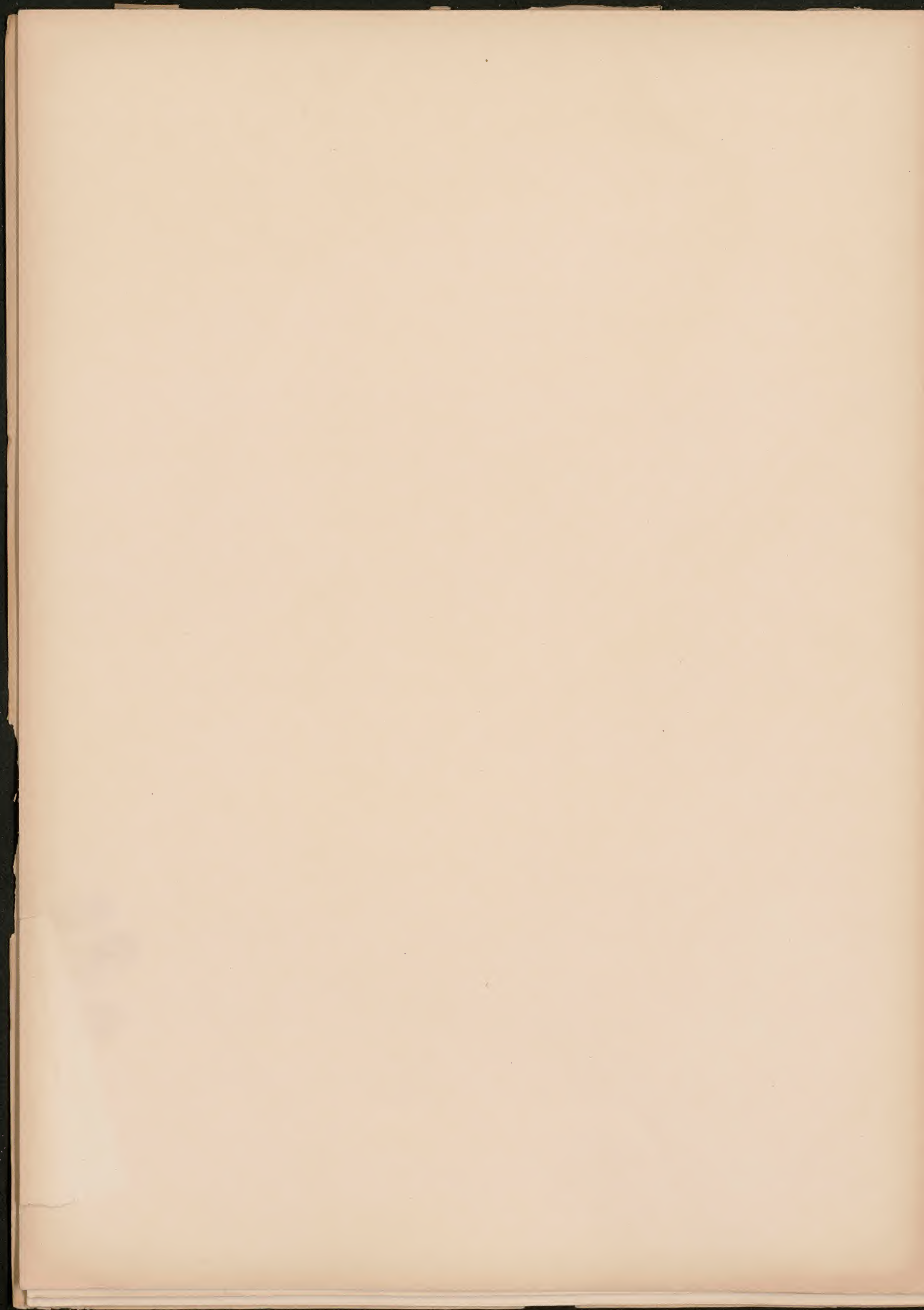


VERLAG UND CHROMOGRAPHIE DER KUNSTANSTALT (FORM. GUSTAV W. SEITZ) A.-G., WANDSBEK.

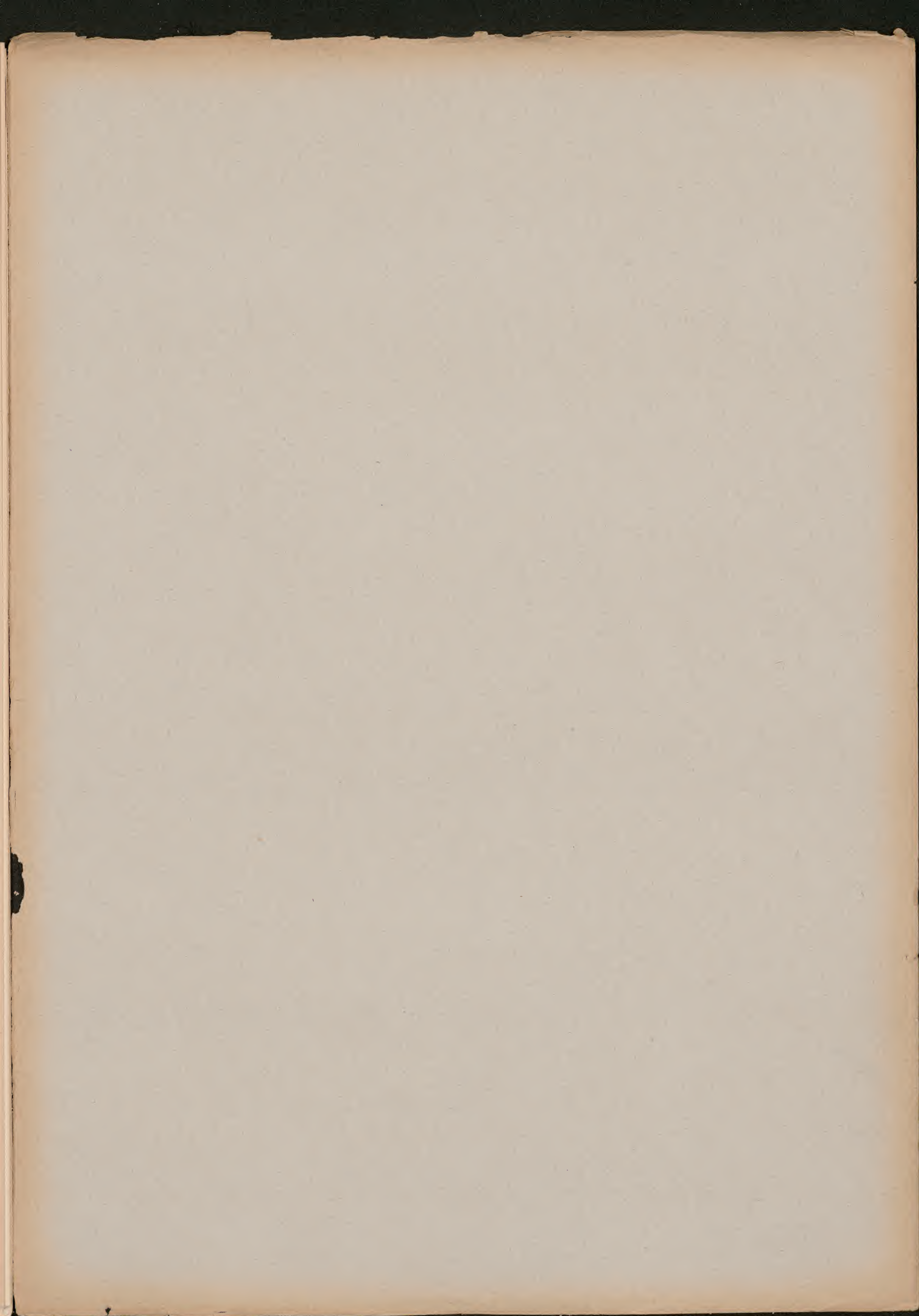
METASTASES SARCOMATOSAE ILEI

Gezeichnet von W. GUMMELT.

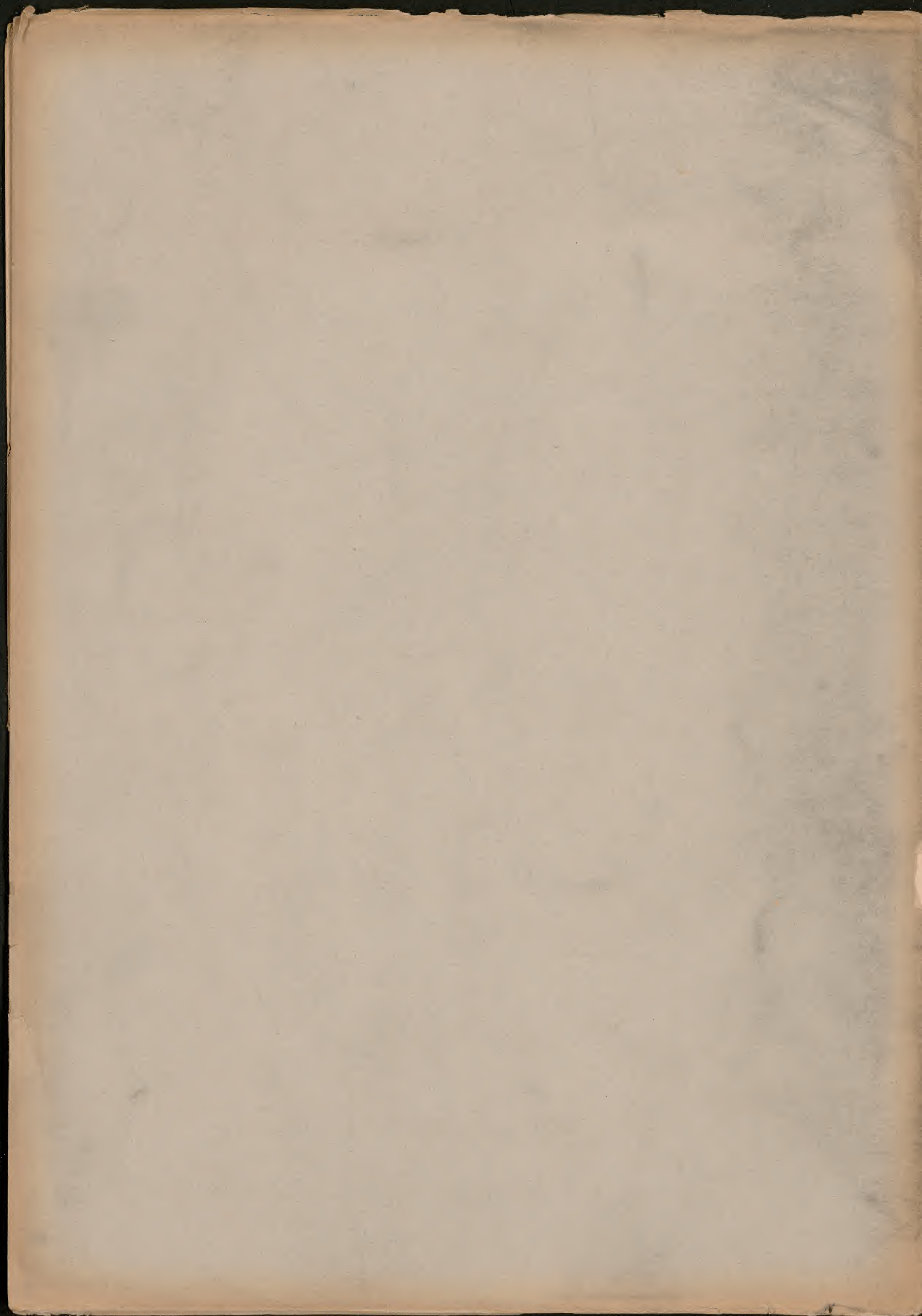








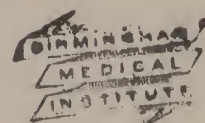






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immediately after death.

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PROF. DR. ALFRED KAST,

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English Edition

revised and edited

by

M. ARMAND RUFFER M. D. OXON.

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PART VII.

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Published by KUNSTANSTALT (vorm. GUSTAV W. SEITZ) A.-G.

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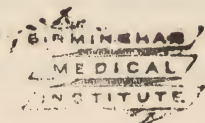


# PART VII.

## ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

### C. I.

#### Ulcerative Endocarditis of the Aortic Valves.



Patient, æt. 27, labourer, had suffered from articular rheumatism for one year previously, but within the last six weeks had become affected with palpitation, breathlessness, and swelling of the legs. He was then suddenly seized with high fever. On admission he appeared well built, but very pale. The legs and feet were swollen, and covered with numerous petechiæ about the size of lentil seeds, but there was no pain in the joints. Temperature  $38.9^{\circ}$  C. ( $102^{\circ}$  F.), pulse 108, respiration 40. Orthopnœa present. Thorax broad, and precordial region distinctly prominent. Apex-beat in the sixth intercostal space, somewhat external to the mamillary line. Cardiac dulness increased on both sides, extends on towards the right to the sternum, and reaches beyond the mamillary line on the left. Sound is clear at the apex, but at the aorta and sternum there is a long-drawn sharp diastolic murmur; the aortic sound is not quite clear, while the sounds at the pulmonary cartilage are accentuated. The heart is regular in action, and pulsus celer present. Over the lungs diffuse catarrhal râles can be heard, but there is no dulness. The abdomen full; liver-dulness slightly increased; moderate ascites, but the spleen is not enlarged. Urine scanty, 600 ccm. (36 cubic inches or 20 fluid ounces), and containing albumen. After two weeks' stay in the hospital the morbid conditions remained about the same, the temperature-curve continuing high and very irregular. Congested patches of a transitory character appeared in the lung, but at last serous hæmorrhagic exudation was found in the left pleura. The patient became very restless, comatose, and rapidly weaker. He died on the sixteenth day after admission.

#### Post-mortem.

Pericardium obliterated and both ventricles dilated. Muscular tissue of a bright red colour, of a faint glossy appearance. Left ventricle slightly hypertrophied. Endocardium in several places of a white cloudy appearance. Aortic valve retracted 1 to  $1\frac{1}{2}$  centimetres, soft and flabby, in several places vegetations may be seen which are easily broken down. Several old vegetations on the margin of the mitral valve. On the posterior margin towards the aortic several fresh excrescences were found. In both pleuræ a small quantity of cloudy fluid was present; in the brown indurated lung several lobular pneumonic centres were observed. Typical nutmeg liver. Several fresh infarcts in the spleen and kidneys; the other organs had nothing particular worthy of notice.

### C. II.

#### Ulcerative Endocarditis of the Mitral Valves.

Patient, female, æt. 32, formerly healthy, was attacked on the 25<sup>th</sup> November, 1891, with a painful swelling of the left hand, and afterwards of the right hand. She was admitted into hospital on the 30<sup>th</sup> of November. On reception she had a strong, healthy appearance, and was in the eighth month of pregnancy. On the right hand between the second and third metacarpal bones a small flat swelling was present, which was slightly painful on movement. There were no inflamed lymphatics or swollen lymphatic glands on the right arm. On the left hand no swelling, and no pain could be observed on pressure. Slight fever present  $37.9^{\circ}$ . All the other organs appeared healthy, the heart being perfectly normal. On the 5<sup>th</sup> December the patient appeared well, free from fever, when she was suddenly attacked with a rigor. Temperature rose to  $40.5^{\circ}$ ; swelling in the hand increased, but beyond this no other symptom of note appeared. December 8<sup>th</sup>.—During the night of December 6<sup>th</sup> and this morning rigors occurred again. Temperature  $39.9^{\circ}$ . Patient complaining of severe headache, but otherwise well. The heart-tones clear; no enlargement of spleen. She was ordered 0.5 gramme of sulphate of quinine twice a day. December 11<sup>th</sup>.—During the last days she had several rigors, whilst in the evening the temperature regularly rose, sometimes to  $40.2^{\circ}$  C. On the upper part of the left leg a flat reddish painful patch was complained of; no fluctuation; pressure on the femur gives no pain. Spleen slightly enlarged, but no implication of joints. 13<sup>th</sup> December.—Remitting fever still continued; to-day a rigor. In the intervals between the attacks of fever great euphoria. The skin is slightly jaundiced; the conjunctiva distinctly yellow. The right processus mastoideus painful to the touch. Cardiac dulness not increased. At the mitral valve a systolic murmur is heard after the first sound; the second sound not increased. Liver not enlarged, but spleen distinctly so. Urine containing a large amount of urobilin, but no albumin. Blood culture on agar gave negative result.

December 16<sup>th</sup>.—Renewed rigors and increased temperature  $41.1^{\circ}$ , after which labour commenced and a healthy child was born; head-presentation, placenta easily removed, and no post-partum hæmorrhage. December 22<sup>nd</sup>.—Fever still continues, ranging between  $38^{\circ}$  and  $39.5^{\circ}$ ; no general disturbance. The different swellings have all disappeared. Cardiac dulness increased; apex beat in fifth intercostal space in the mamillary line. A loud systolic mitral murmur with abnormal sound of pulmonary valve; heart regular. Lungs normal; spleen perceptibly enlarged; urine contains albumin. 25<sup>th</sup>.—Suddenly attacked with severe pain on right side, and dyspnœa. In the right lung dulness with feeble breathing. 28<sup>th</sup>.—Pulmonary dulness increased with pulmonary breathing. General condition greatly aggravated. 1<sup>st</sup> January, 1893. —Death ensued without any other symptoms making their appearance.

#### Post-mortem.

About 50 ccm. of clear fluid found in pericardium; heart greatly enlarged; left ventricle greatly dilated, and muscular tissue of a reddish-brown colour, but not hypertrophied. Around the margin of the mitral valve a number of large vegetations resembling stalactites are present, covered with loosely-adherent clots on margin. If the clots be carefully removed ulcerative depressions may be observed; another ulceration about the size of a bean with a dirty-looking floor is found just below the vegetation (about  $1\frac{1}{2}$  cent. in length) covering the anterior mitral valve. (This is not to be seen on the drawing.) Aortic valve intact; right auricle dilated, but right ventricle unchanged. The other part of the examination showed pleuro-pneumonia on the right lower lobe, infarcts in the spleen and kidneys, and an embolus in the right arteria femoralis, just below the origin of the arteria profunda.

### C. III.

#### Endocarditis Vegetans.

The heart exhibited is that of a tailoress, æt. 30, who five years previously had suffered from a slight attack of rheumatism. The patient had not since had reason to complain of her heart. The disease commenced with vomiting, pains in the knee and jaw, high fever, shortness of breath, hypostasis in both lungs appeared, and she died within fourteen days of the onset. Examination of the circulatory apparatus had shown that the apex beat was visible in the fifth intercostal space, and distinctly heaving in character. Cardiac dulness extended a finger's breadth to the left of the mamillary line. A well-marked systolic murmur was present, best heard over the third left cartilage; the second pulmonary sound increased and sharp. Heart accelerated, but slightly irregular. Pulse remarkably weak and soft considering the increased action and hypertrophy of the heart.



At the post-mortem the pericardium was greatly distended, the walls of the pericardium had completely grown together, and were firmly adherent, so that they could be separated only by tearing the heart-substance. Left ventricle large, muscle-substance hypertrophied, of a yellowish-brown colour. The papillary muscles thickened and somewhat flattened; the chordæ tendineæ similarly thickened and shortened. Microscopic examination revealed moderate fatty degeneration of the muscular tissue. The margin of the mitral valve is covered with gelatinous excrescences resembling a cock's comb; in the middle between the two flaps a vegetation about the size of a walnut is met with, presenting an irregular surface. After washing away the loose adherent post-mortem clots the valve was found to be of a pure white tissue of equal regular consistence. The aortic valve was normal; the right ventricle showed nothing abnormal. Both lower lobes of the lung were hypostatic; the other organs no particular change beyond a high state of congestion.

#### C. IV.

### Degeneration of the Cardiac Muscles, owing to Blockage of the Coronary Arteries.

This preparation was obtained from a Russian emigrant, æt. 64, who on his journey was seized with general dropsy, and was admitted into hospital with these phenomena, and died four weeks after admission.

Enlargement of the heart was not observed during life; the sounds were clear, regular, slightly accelerated, 84 to 96 per minute. The pulse was small and easily compressed. Liver and spleen greatly enlarged; there was slight ascites; slightly marked hydrothorax and marked anasarca. Urine albuminous, quantity very small. During his residence in hospital he was very restless and could not sleep. The case was otherwise noticeable in so far as the cardiac and other medicines administered had not a transitory effect even.

#### Post-mortem.

The pericardium at the apex is adherent, the left ventricle enlarged though not hypertrophied, muscular tissue having a dark-brown colour, with numerous whitish-gray spots.

At the apex there was a large sac-like bulging, of a sinewy-white colour, and within this sac was found a laminated blood-red thrombus, about the size of a walnut. The valvular apparatus and endocardium were intact. The coronary arteries were far advanced in sclerotic changes; the left coronary artery leading to the apex was quite obliterated.

#### C. V.

### Ulcerative Recurring Endocarditis of the Pulmonary Valves.

E. W., æt. 21, baker, without any hereditary taint, has never had rheumatism or scarlet-fever. His present illness commenced about five weeks ago—the beginning of December, 1892—with fever, loss of appetite, within the last few days pain in the body, vomiting, swelling in the feet. On admission into hospital on January 9<sup>th</sup>, 1893, temperature was 36.4°, pulse 64, respiration 12.

He had the appearance of being very ill, but fairly nourished. The visible mucous membranes and skin pale. Face somewhat swollen, and slight œdema along the ankles. Sensorium dull, fundus of eye normal, throat and lungs free. Apex beat in the fifth intercostal space extending in a diffuse manner to the mamillary line. At the base of the heart, in the second intercostal space, a pulsation could be felt and seen.

First sound slightly increased, with a whirring sound during the second half of the diastole. The dulness increased on both sides. The upper margin extended to the lower border of the third rib; the right margin inclined across the sternum to the lower border of the fifth rib in the right or parasternal line; the left border cut the mamillary line, extending to the apex of the heart. The heart's sounds were very feeble; the first sound at the apex was clear, but a slight murmur accompanied the second sound. Over the pulmonary valve a systolic murmur, with a loud diastolic murmur accompanying the second sound. Over the middle and lower portion of the sternum the murmur was slightly feebler. There was no pericardial friction. Pulse low, soft, and regular. Abdomen large and distended. Palpation of the liver impracticable, owing to pain, but dulness increased. Spleen normal. Joints free, patellar reflex could not be obtained. Urine scanty, 100 ccm., sp. gr. 1.016, cloudy, of a reddish-brown colour, strongly acid, containing no albumin, numerous hyaline and granular cylinders, fatty epithelium from the kidneys, and a few red blood corpuscles.

Bowels normal. Blood contains 35 per cent. of hæmoglobin. Fleischl's cubic centimetre containing 2,000,000 blood corpuscles, leucocytes 1—75, principally composed of polynuclear elements; eosinophile cells not increased. Cultures on agar remained sterile. Frequent epistaxis. Vomiting persistent at first, mixed with bile. Later on temperature 38.4°, singultus, cerebral dulness increasing, apathy and death.

#### Post-mortem.

Slight œdema of the under extremities, and genitals with ascites. Heart greatly enlarged, the pericardium containing 100 ccm. of clear yellow fluid.

The cavity of right ventricle greatly distended, the trabeculæ and papillary muscles distinctly thickened; pulmonary valve greatly disorganized, the left flap being almost entirely destroyed, small fragments only being left; the posterior flap is for the most part present still, but there is a tear extending from the left upper to the right lower side, and the valve is nearly torn away. The surface of this valve had a dirty yellowish colour, tough, feels like a stone between the thumb and finger, and has an irregular surface, with a few very small thrombotic deposits. The right valve normal, with a fine grayish-red vegetation on the inner smooth surface. All the other valves normal. Cardiac muscle pale, though without marked alterations in colour. In the middle lobe of right lung a large hæmorrhagic infarct. In the branch of the artery supplying it a firm thrombus about 2 c., of hard consistence, chalky surface, and of a yellowish-white colour. It is apparently part of the valve from the pulmonary artery, which, becoming detached, had been carried into the lung, and become fixed in the lumen of the vessel.

Spleen notably increased. Liver greatly enlarged, extending in the mamillary line a finger's breadth below the margin of the ribs; tissue generally hyperæmic, centre of the acini distinctly visible.

Kidneys markedly and uniformly increased; capsule easily detached; surface clear or glossy, with numerous dark-red spots with gray points between. The cortex greatly swollen, grayish-yellow colour along the line of the canaliculi, with hæmorrhagic points here and there.

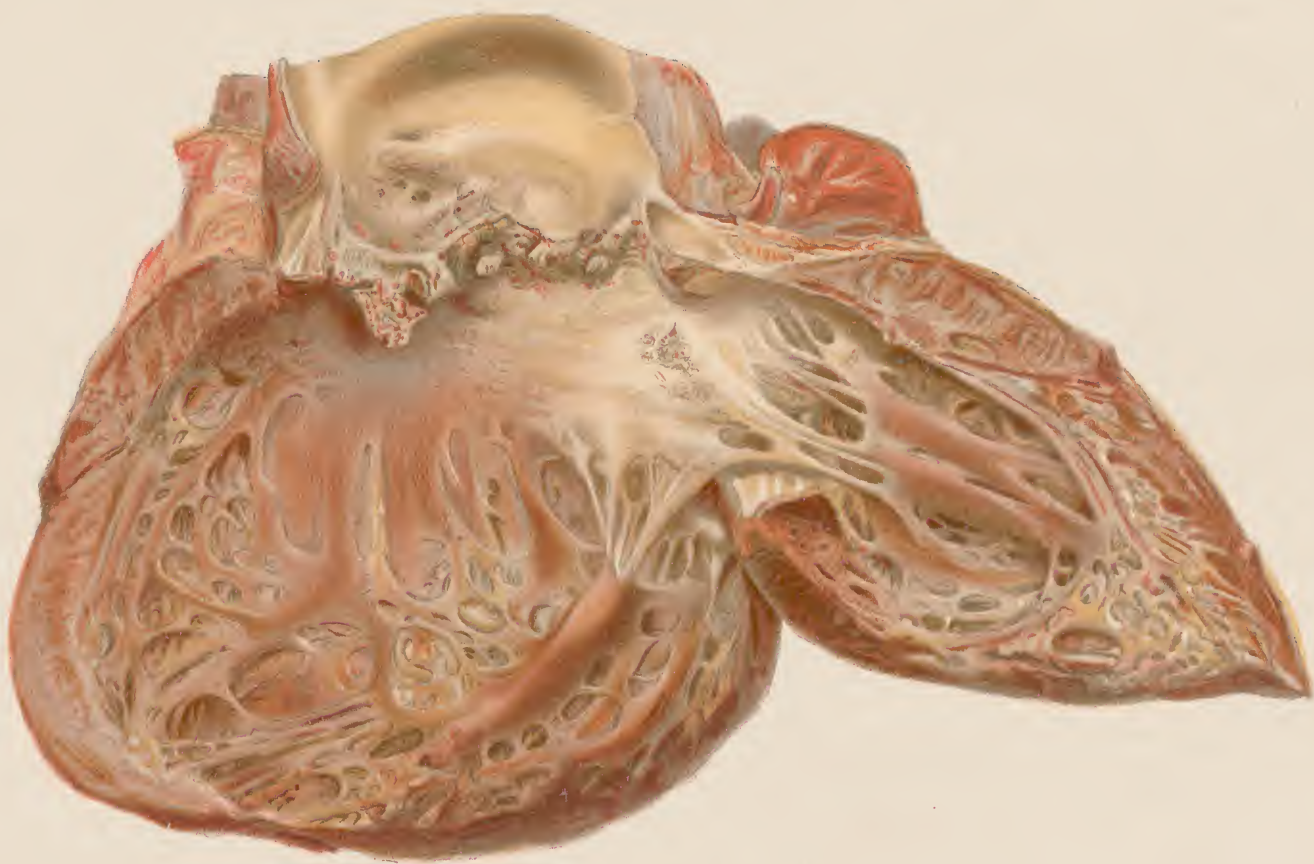
Glomeruli large and white. Malpighian corpuscles red, medullary substance red, in sharp contrast to the cortical substance. The jejunum and ileum somewhat œdematous, especially over the valvular conniventes, with numerous patchy and streaky hæmorrhages of small extent.

#### C. VI.

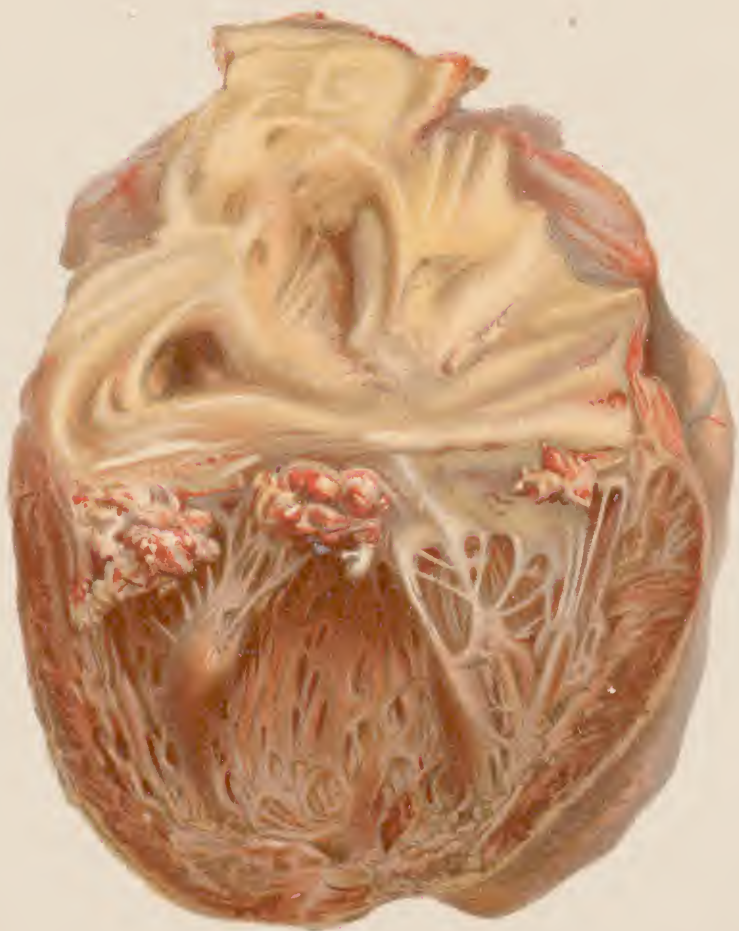
### Large Fatty Heart.

This preparation was obtained from a sailor, æt. 61, who suffered from aortic insufficiency of rheumatic origin, and died with general disturbances of heart-function.





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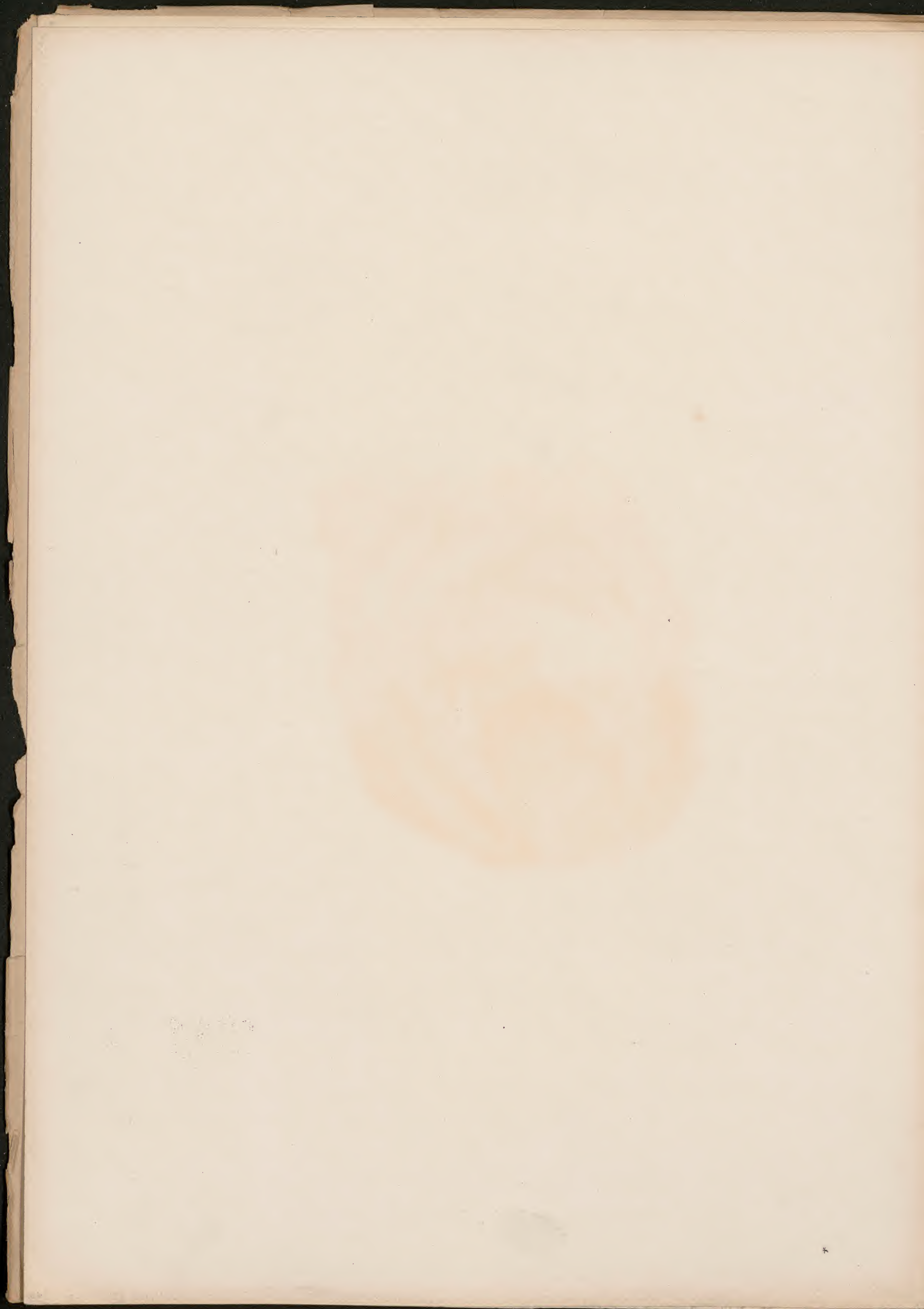
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W. GUMMELT  
M. DICKEL  
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ENDOCARDITIS ULCEROSA AORTAE ET MITRALIS.

Gezeichnet von W. GUMMELT.

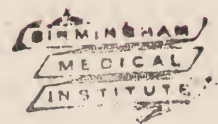






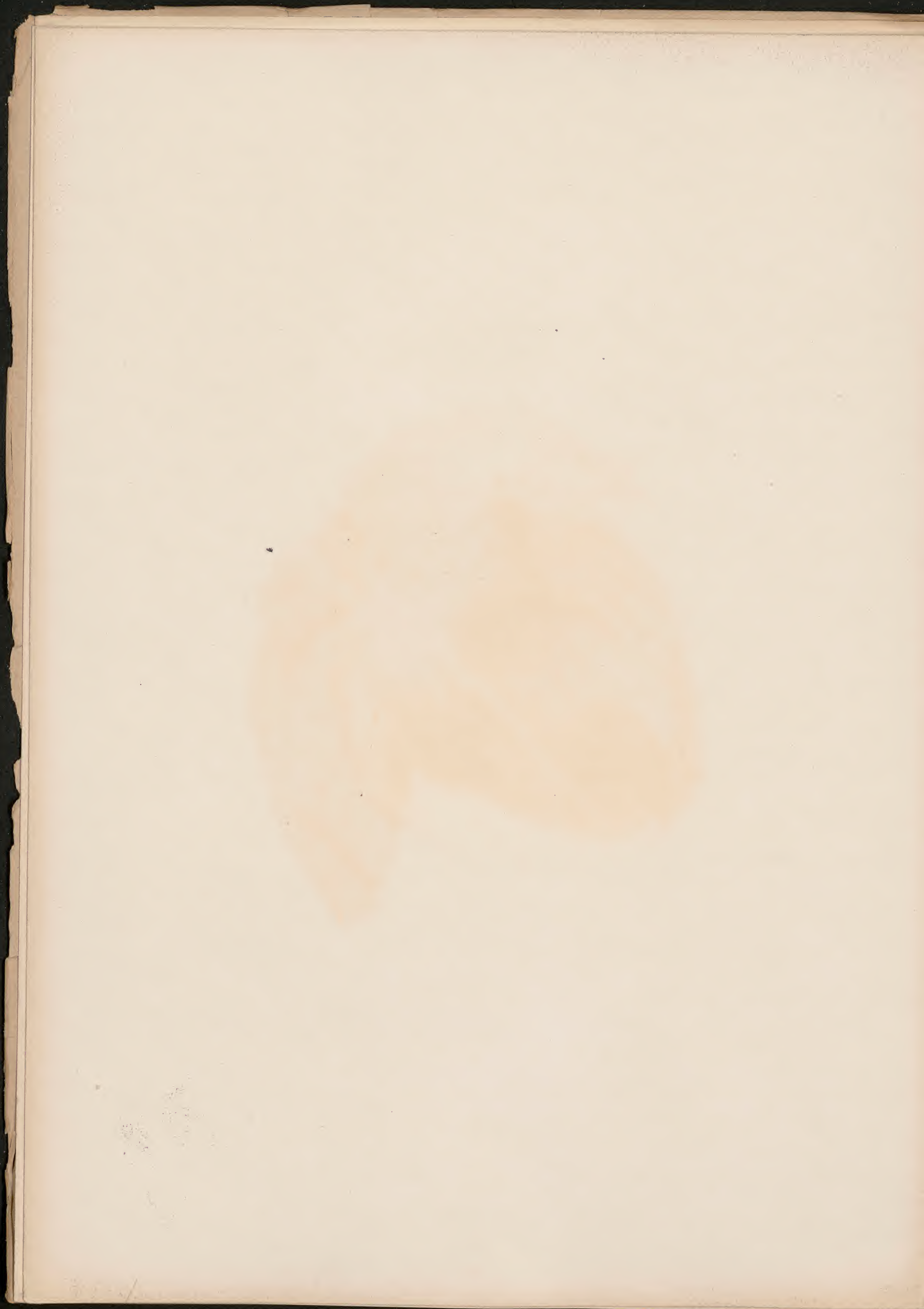


ENDOCARDITIS VEGETANS MITRALIS. —



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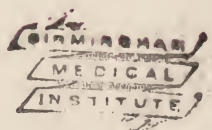


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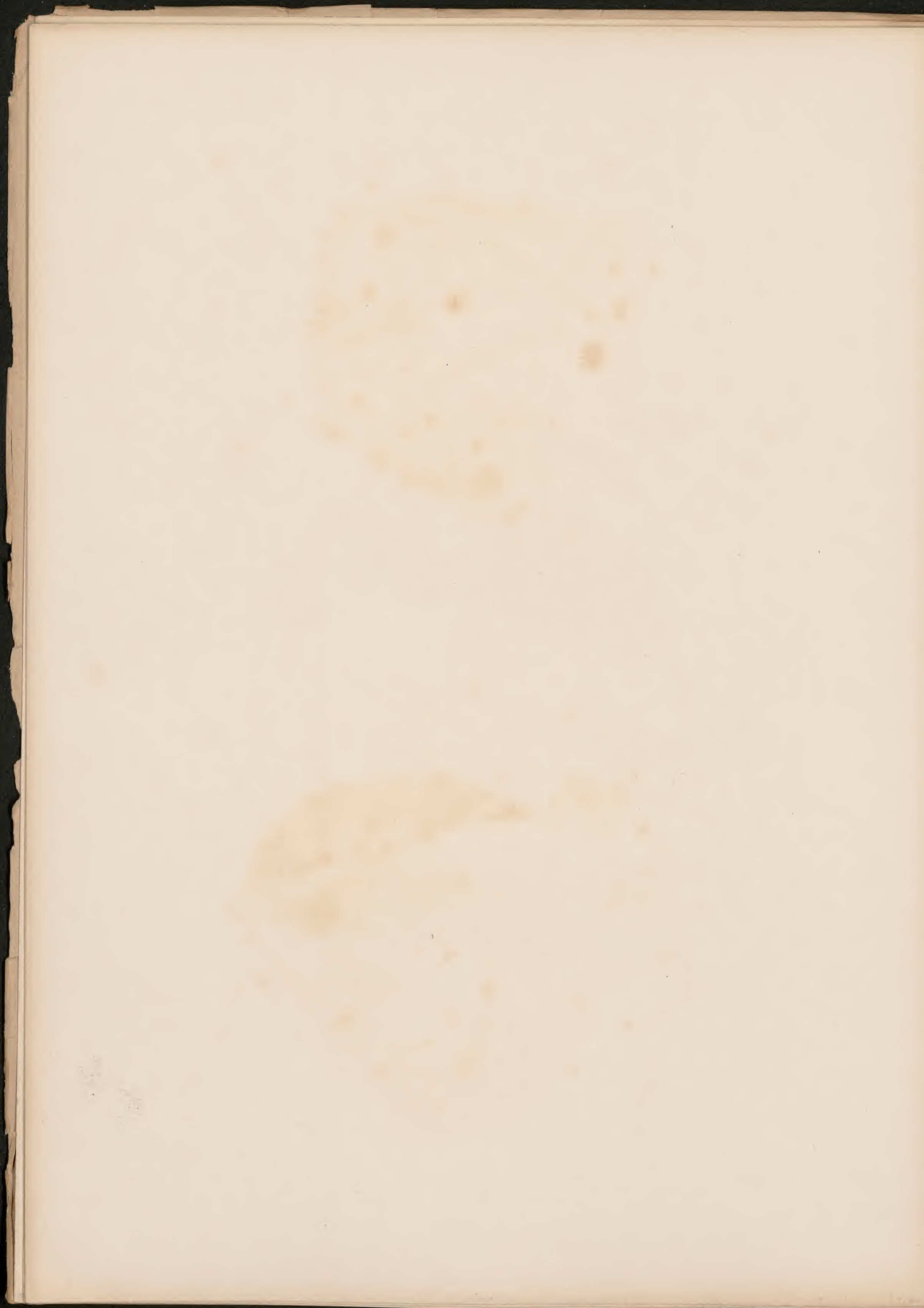


MYODEGENERATIO CORDIS E THROMBOSI ARTERIAE CORONARIAE.  
ANEURYSMA CORDIS THROMBUM CONTINENS.

Gezeichnet von W. GUMMELT.











ENDOCARDITIS ULCEROSA PULMONALIS.

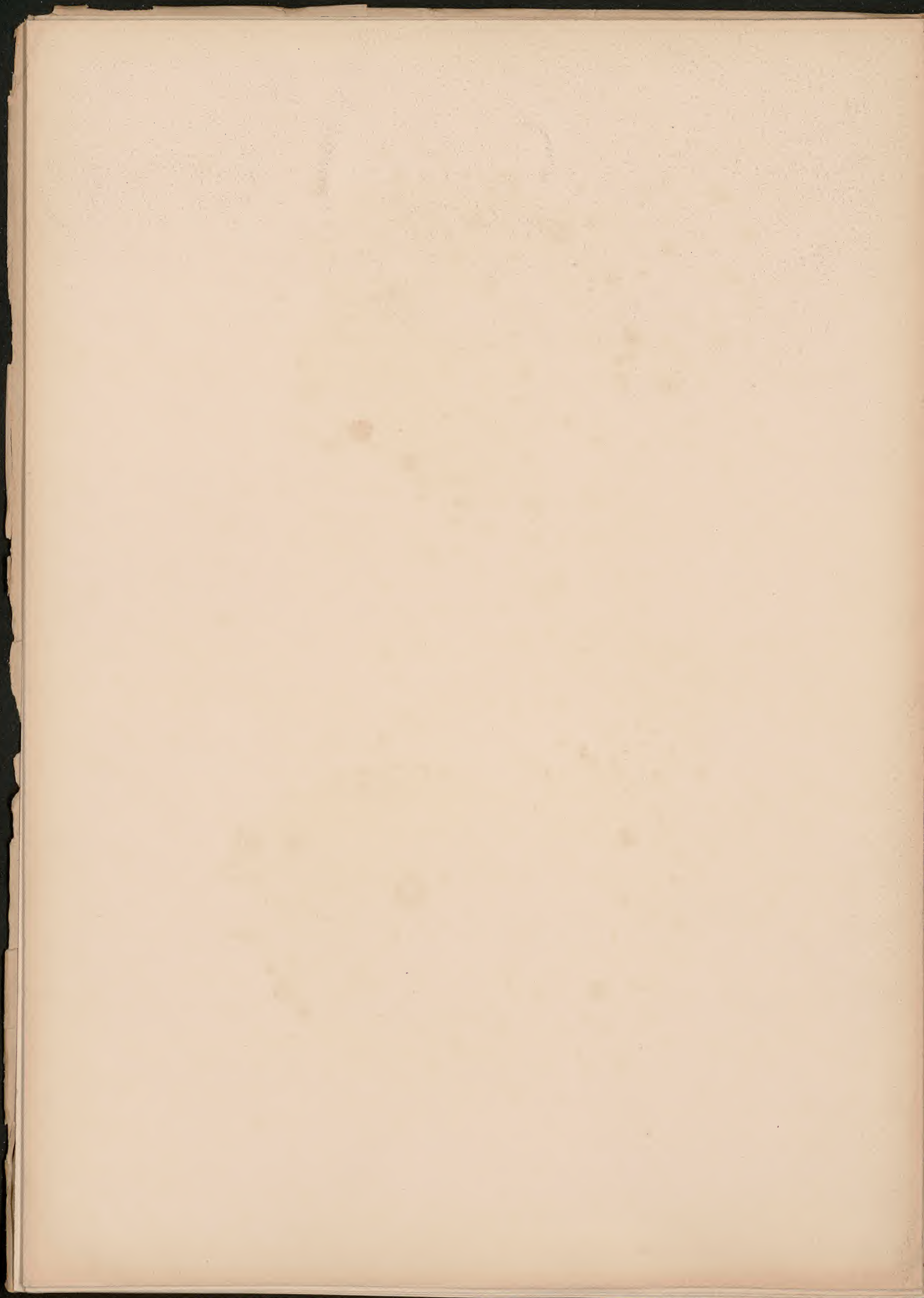
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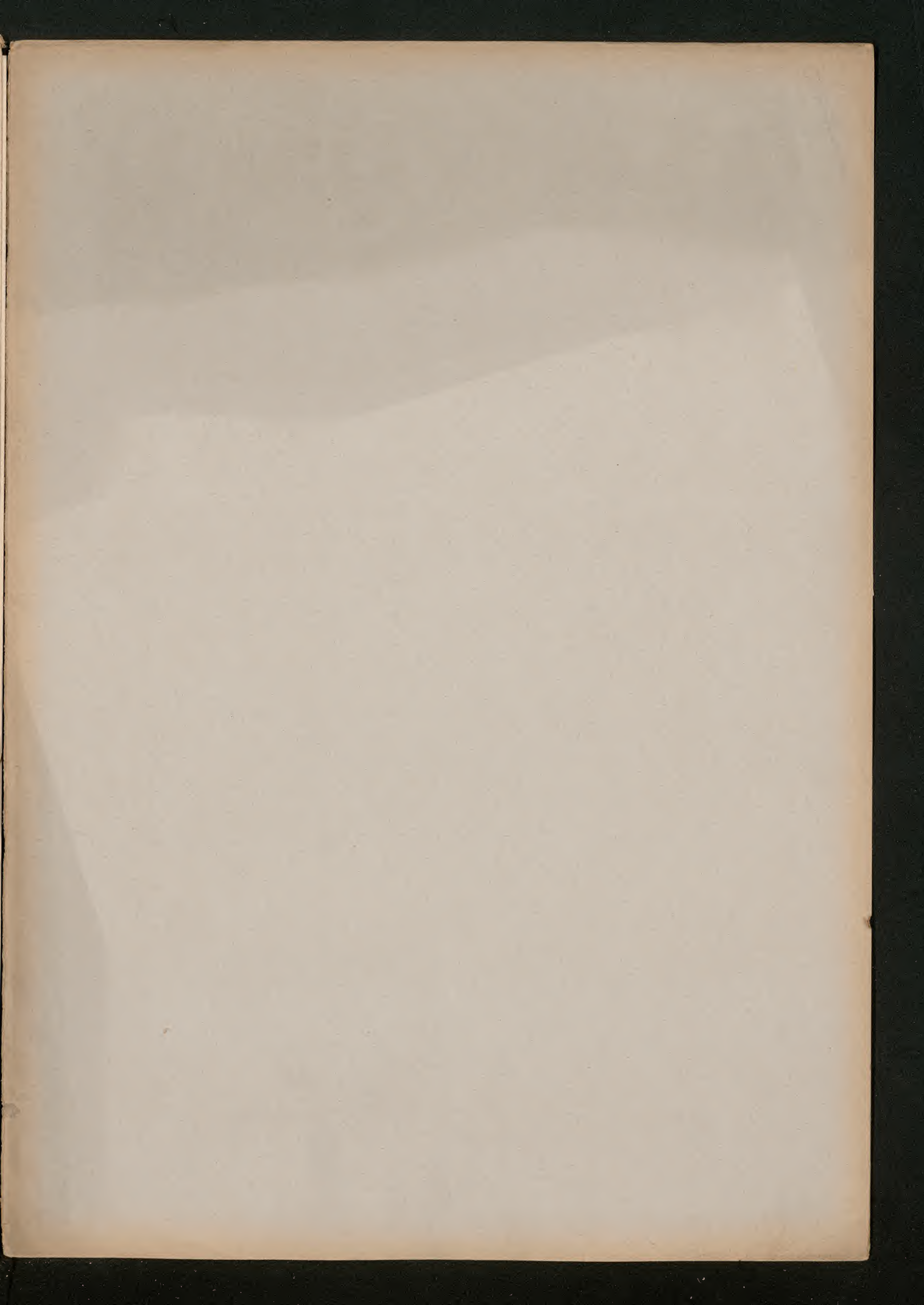
DEGENERATIO ADIPOSA MYOCARDII PARTIALIS.

Gezeichnet von W. GUMMELT.

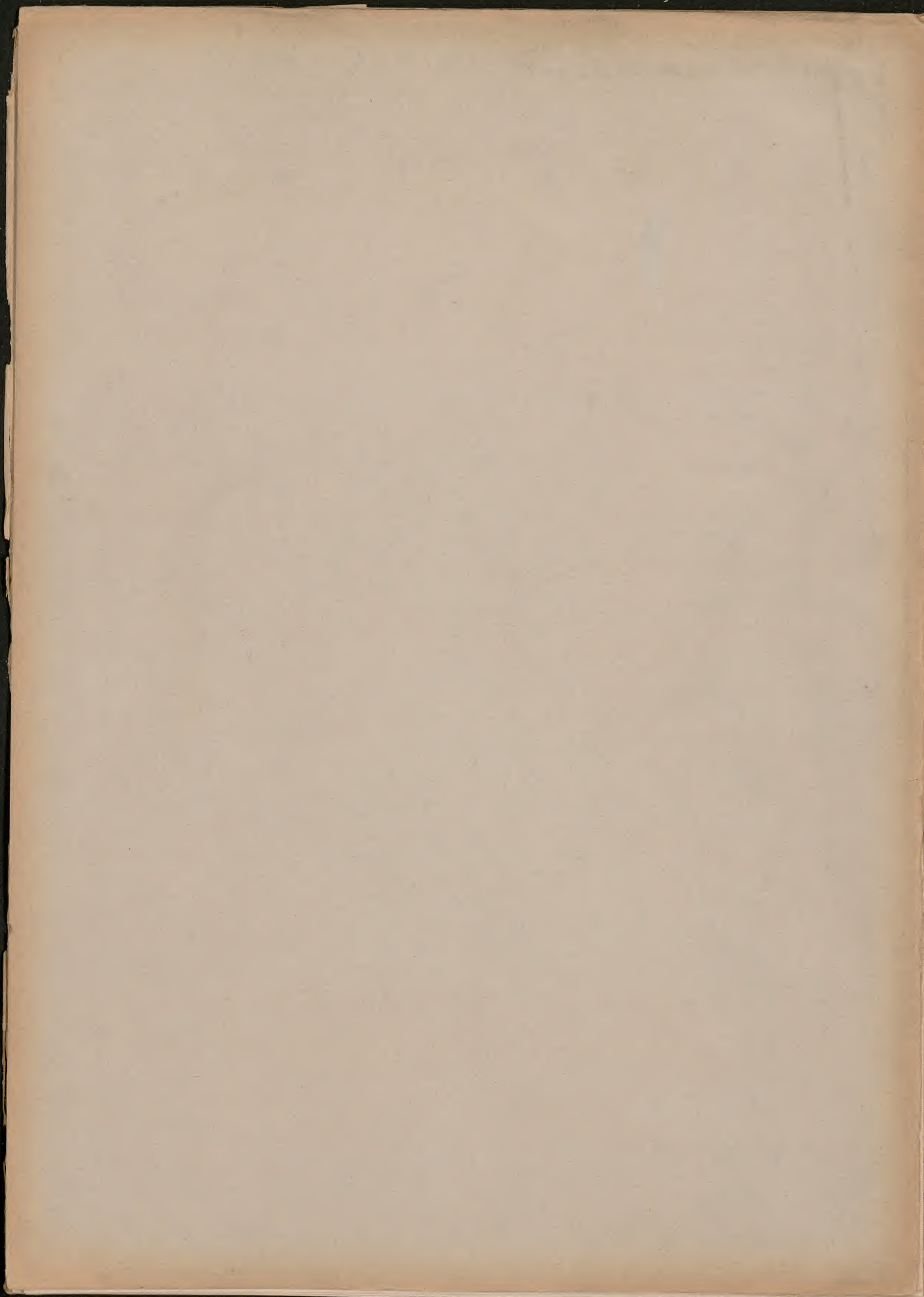














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## PART VIII.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

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### F. XIV.

#### Typhoid in the Early Stage.

Patient, a workman, æt. 24, had always enjoyed good health, but was seized four days prior to admission with general malaise, severe headache, pains in the back, and high fever,  $41^{\circ}$  C. ( $105^{\circ}$  F.). He was removed to hospital on account of great restlessness, with mental aberration. During the three days' residence the unconsciousness increased. He could not be kept in bed, while stools and urine were discharged involuntarily. Temperature continued between  $40^{\circ}$  and  $40.6^{\circ}$  C. Pulse regular, 80. Thoracic organs normal. Abdomen distended; spleen greatly enlarged, and on the third day roseolar spots were observed. Death ensued in the evening, after seven days' illness, without any apparent complication.

#### Post-mortem.

Peyer's patches and the solitary follicles of small intestine equally swollen and enlarged, and, when divided, they showed a grayish-white medullary substance. The upper surface of the Peyer's patch, measuring about  $\frac{1}{4}$  centimetre, was raised. In some places it appeared smooth, and in other parts it showed wave-like depressions. No ulceration was observed anywhere. The part most affected was the region immediately above the ileo-cæcal valve, although nearly the whole ileum was involved. The large intestines contained some enlarged solitary follicles. The mesenteric glands were greatly swollen and congested; the spleen large and soft. There was some hæmorrhagic effusion into the muscular tissue of the rectus abdominis, but otherwise the post-mortem revealed nothing of special importance.

### F. XV.

#### Typhoid in the Ulcerative Stage.

Patient was a young woman, æt. 18, who has suffered for several days from general disturbance, with fever, headache, and diarrhoea. After seven days in bed at home, and as her general state grew worse, she was admitted into hospital. Temperature  $40.3^{\circ}$  C. Pulse 120. Respiration 32.

Mouth is dry, tongue coated, sordes, pharynx red and covered with tough tenacious mucus; lips cyanotic; numerous red spots on the thorax and abdomen. Heart not enlarged; mitral sound softer than the second sound; no murmur; heart-beat accelerated. Over the lungs a diffuse bronchial catarrh. Posteriorly over the lower lobe a number of moist râles. Abdomen distended and tender to pressure. Spleen greatly enlarged and tender. Liver-dulness somewhat increased. Urine scanty, containing a small quantity of albumen, but no casts. She was ordered a gargle, ice to the head, camphor, wine, and cold baths. Next day temperature still rose, with slight diarrhoea, and the danger increased owing to weakness of heart. The pulse rose to 140 and 160 beats a minute, and was easily compressible. Cyanosis of the face became more pronounced. Numerous moist râles appeared over the pulmonary region, and posteriorly on both sides dulness for a hand's breadth. On the third day of hospital residence the pulse became thready, and could scarcely be felt, rising to 200; and on the eleventh day of the disease death ensued.

#### Post-mortem.

In the half metre above the ileo-cæcal valve the Peyer's patches were greatly enlarged, covered with a greenish discharge, the margin of the patches being very red around the discharging surface. The solitary follicles were also swollen. The mucous membrane in the region of the ulcers was much injected. Spleen large and soft. Liver increased and engorged. Both lungs hypostatic. Muscular tissue pale. Right ventricle and auricle dilated.

### F. XVI.

#### Typhoid in the Stage of Healthy Ulceration.

Patient, young woman, æt. 22, suffered from typhoid phenomena nine days ago. On admission into hospital she had high fever, cerebral cloudiness, numerous roseolar spots, enlarged spleen, and slight bronchitis. Four days after admission the fever continued in the usual course, but afterwards the temperature went down in the morning ( $37.6^{\circ}$ ), but rose to  $39.6^{\circ}$  in the evening.



The general condition of patient improved, and she appeared convalescent. On the 17<sup>th</sup> day of disease she suddenly had a fainting fit; bowels acting involuntarily, discharging a large quantity of dark-brown matter, apparently blood. The following day she had several stools of the same nature; rigors supervened, the temperature rising to 41° C. The abdomen was greatly distended and tender; face pale, with scarcely perceptible pulse. In the evening the dark stools again made their appearance, and she died on the 18<sup>th</sup> day of the disease.

#### Post-mortem.

Rectum and lower part of the bowel filled with dark material, partly fluid and partly clotted; the mucous membrane being deeply stained with the black discharge. In the ileum long deep ulcers with elevated margins, the bases of which were rough, sometimes reticulated. In one ulcer, about 15 centimetres above the ileo-cæcal valve, the base reached the muscular coating which was filled with a blood-clot; but on removing this the sides were found to be eroded, and the mouths of the small vessels open.

The individual solitary follicles were mostly covered with a greenish discharge, while others appeared to have already healed. The post-mortem further revealed nothing special except a highly anæmic state of all the other organs.

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### F. XVII.

#### Typhoid Cicatrized Ulcers.

Patient, young girl, æt. 14, was admitted into hospital at the end of the 3<sup>rd</sup> week of the disease with all the phenomena of typhoid. There had been continuous fever, often rising above 41° C., and several small abscesses were found on the upper leg and arm, evidently due to previous treatment by subcutaneous injections. After the abscesses in the arms had been opened the temperature gradually fell to normal, but remained, during the 5 weeks which patient lived in the hospital, between 37½° and 39°; pulse 130 to 160. Slight diarrhœa continued, although disappearing at intervals. No tenderness in the abdomen was present; splenic dulness increased, and urine contained varying though small quantities of albumen. Death followed after great emaciation and exhaustion with weakness, on the 5<sup>th</sup> day of the disease.

#### Post-mortem.

Directly above the ileo-cæcal valve there were several flat defects about the size of a bean in the mucous membrane of the bowel, the margins of some being darkly pigmented. In other places the mucous membrane was intact, but in other places again small dark masses of this pigmented material were found under the mucous membrane. Somewhat higher in the bowel cicatrices were observed with great loss of substance, evidently at a spot corresponding to a former Peyer's patch.



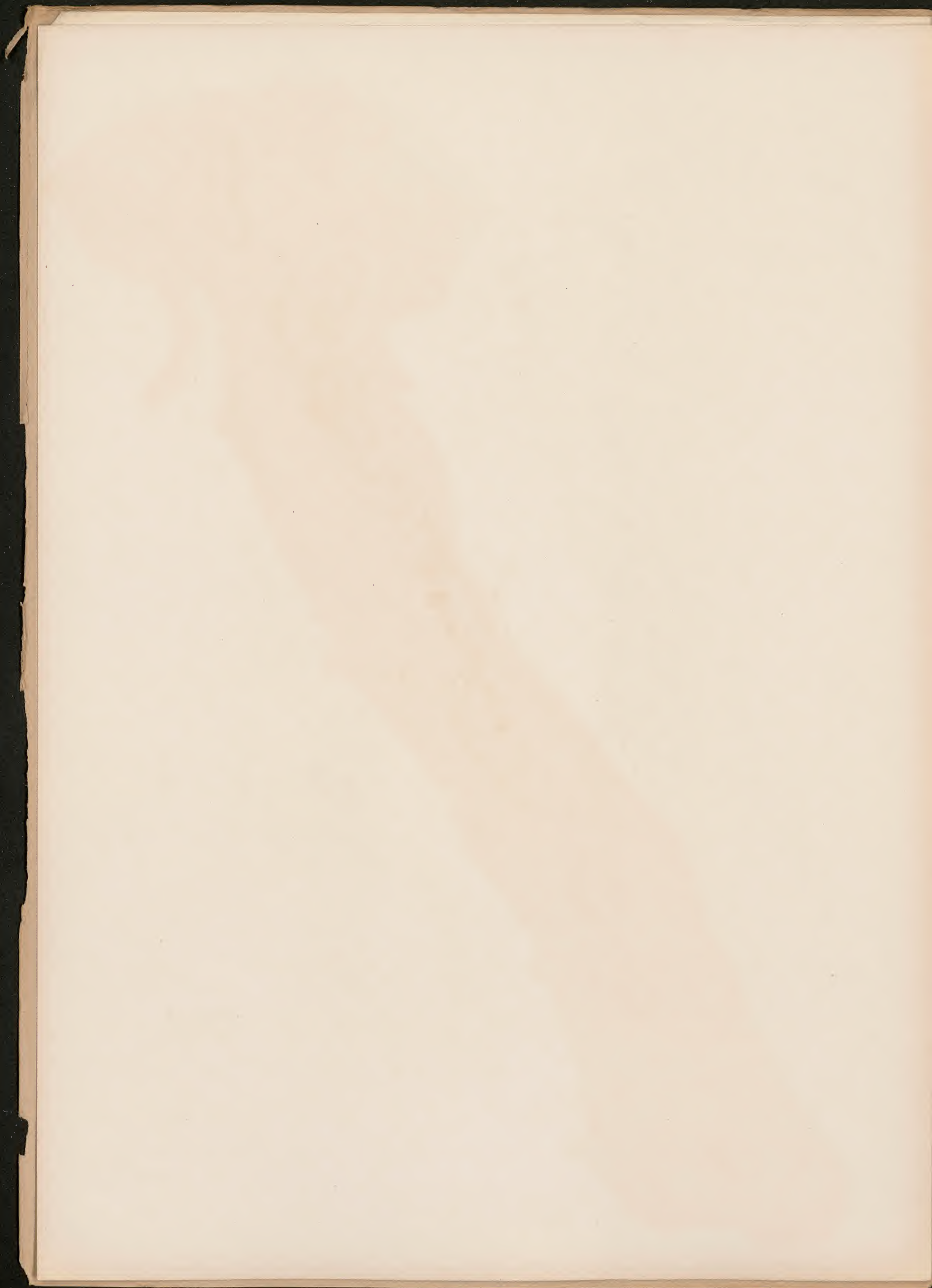


TYPHUS ABDOMINALIS. INTUMESCENTIA MEDULLARIS.

ANAT. MUSEUM  
B. M. N. R. 1. 1. 1.  
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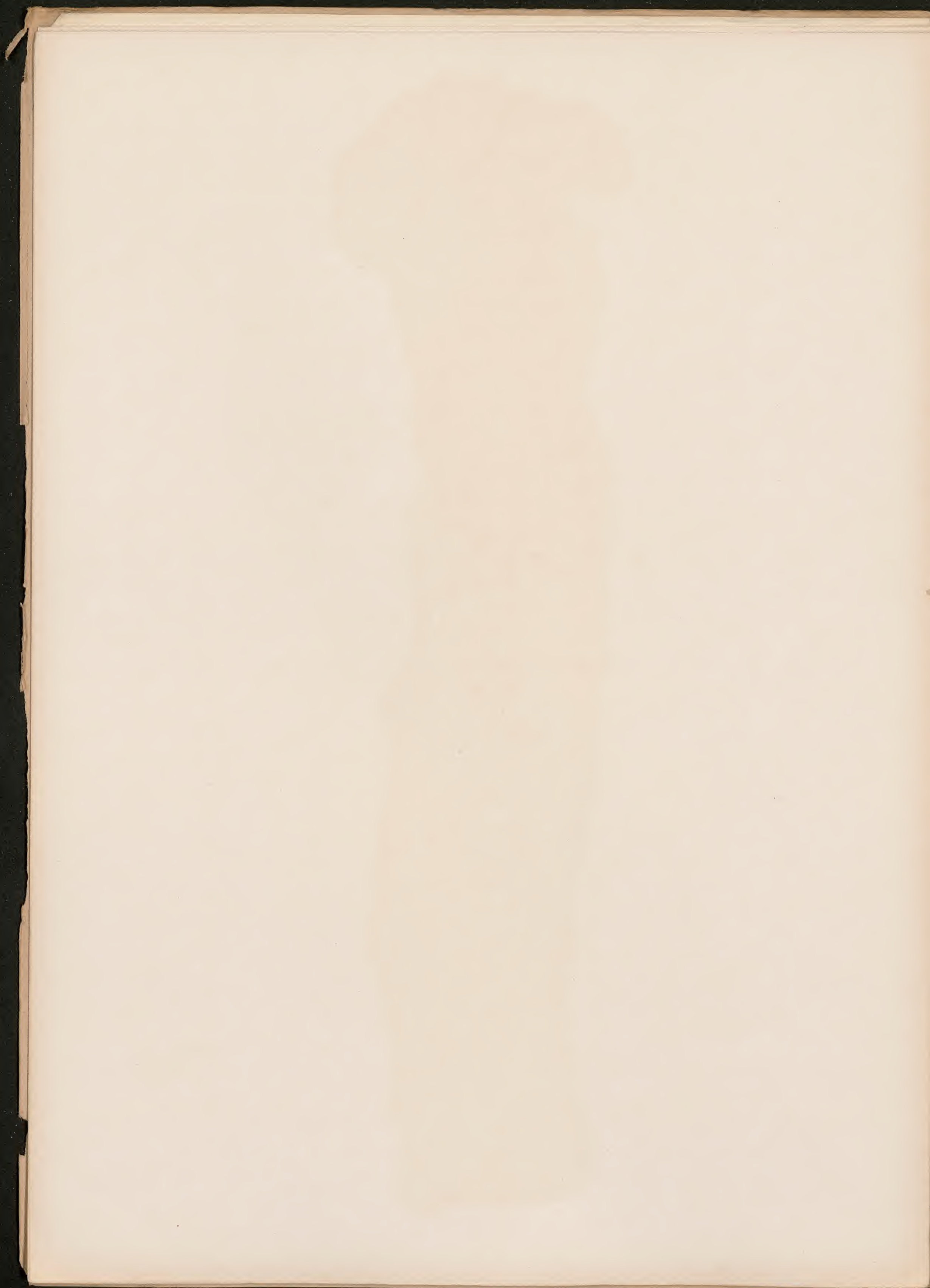




TYPHUS ABDOMINALIS. NECROSIS SUPERFICIALIS.

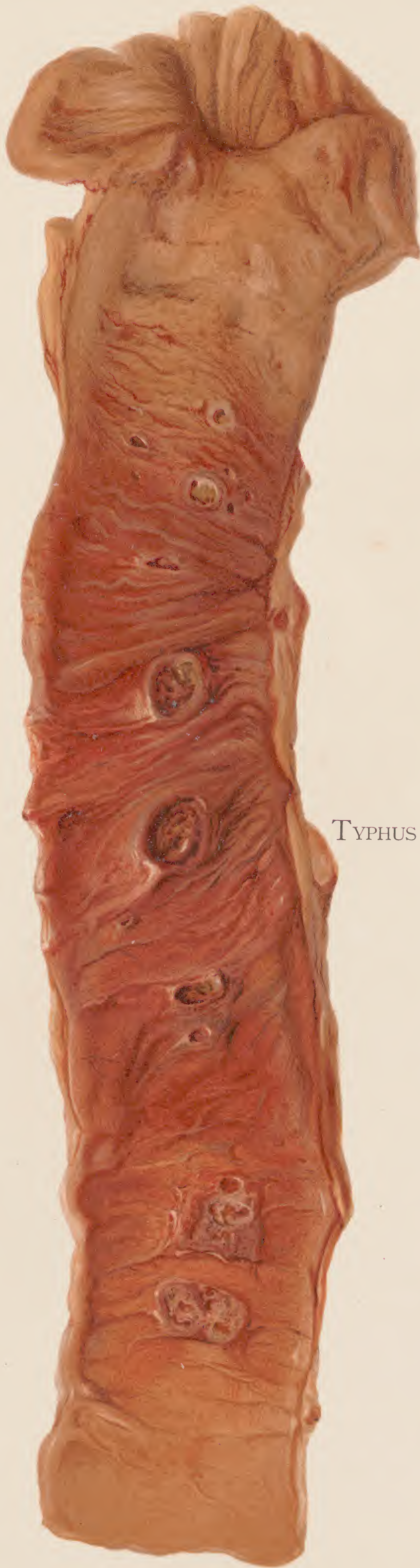
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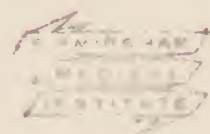


F 16.—

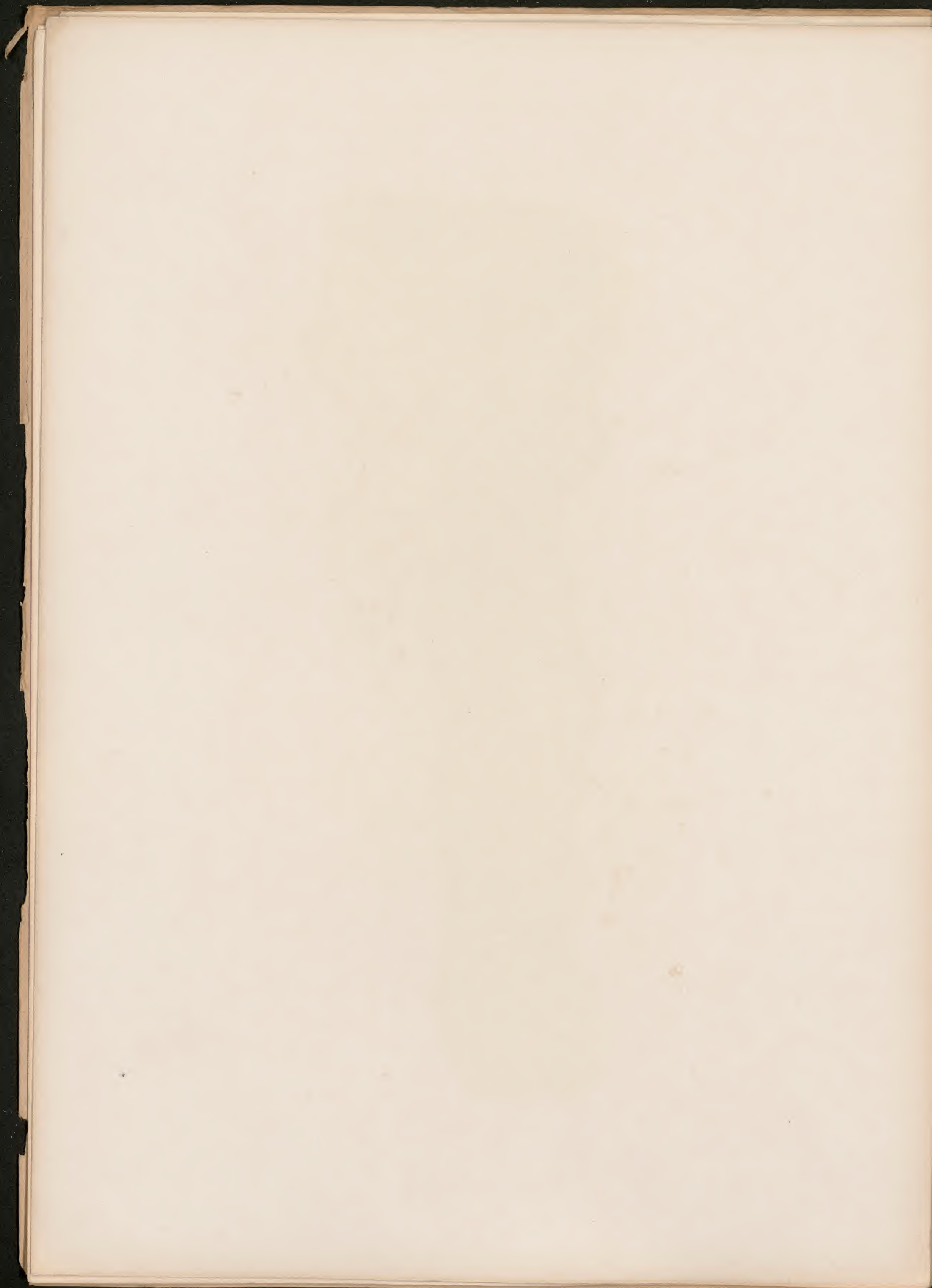


TYPHUS ABDOMINALIS. ULCERA DEPURATA.

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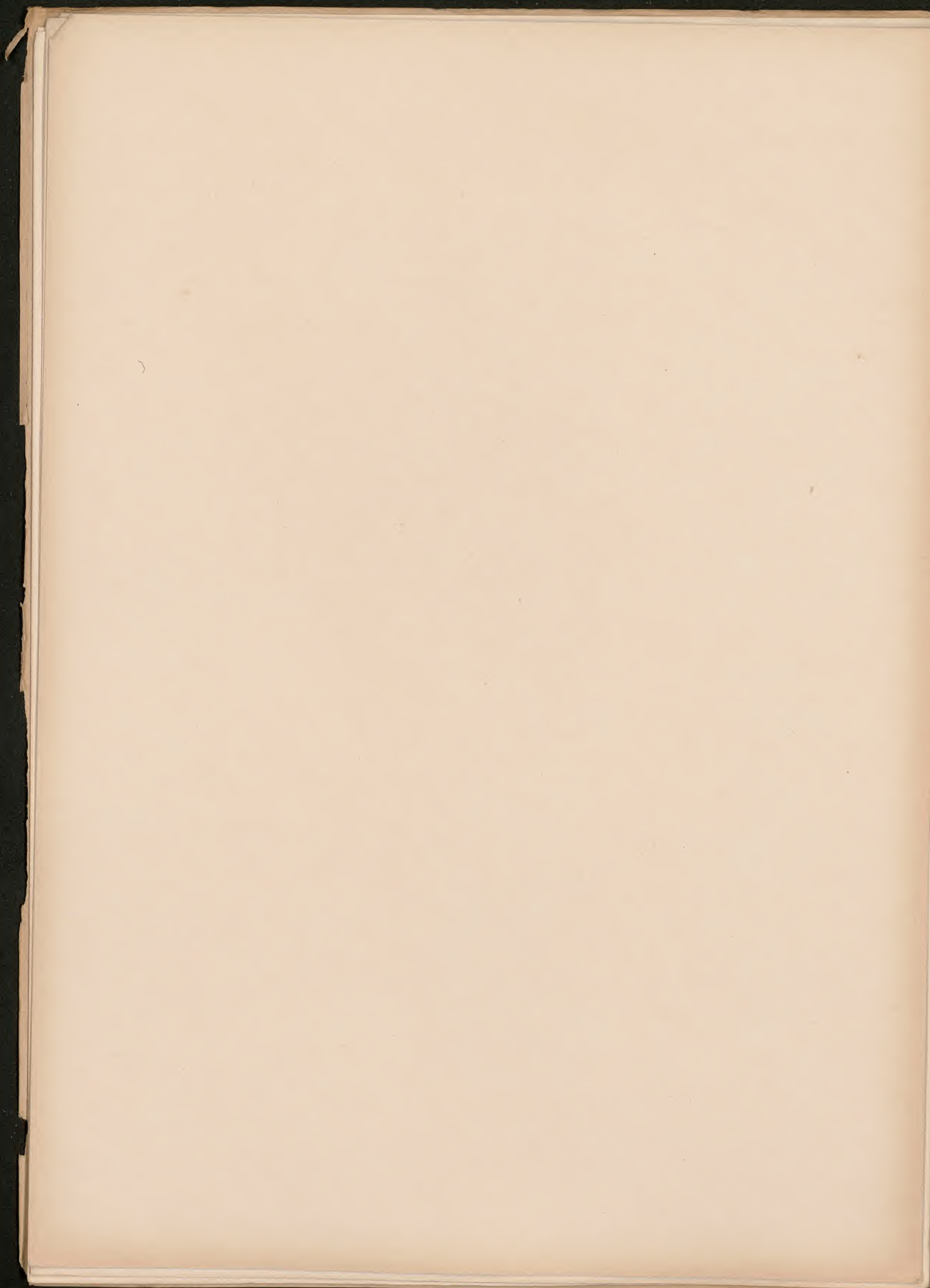


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TYPHUS ABDOMINALIS. ULCERA LENTESCENTIA. CICATRICATIO.

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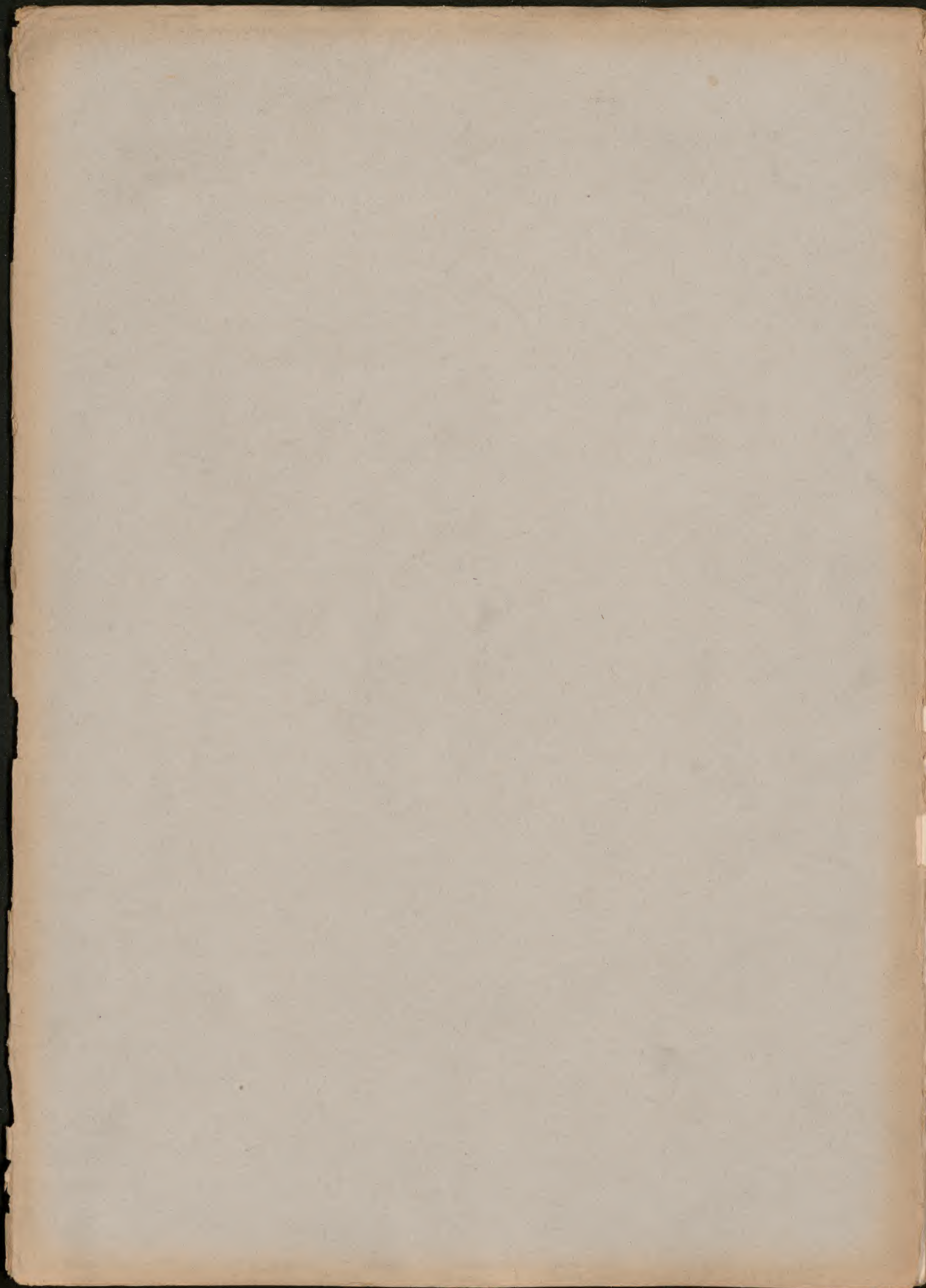














ILLUSTRATIONS  
OF  
PATHOLOGICAL ANATOMY

Being a series of chromographed plates painted from nature

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PART IX.

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# PART IX.

## ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

### U. III. Stroma Supra-renal.

#### (a) Granular Swelling of the Cortical Substance.

This was a case of a man, æt. 50, who died of pneumonia. In the left supra-renal region a tumour the size of a chestnut was found, which, on section, proved to be regular fatty degenerative colour. On the margin of this tumour was still to be found remnants of the supra-renal body; in the centre of the tumour one large and several smaller fresh blood-clots. Microscopic appearance showed that the swelling had been formed by unbranching cells burrowing their way through the fibrous septa, and subsequently destroying it. This cell stroma had passed almost through the entire gland, and produced fatty degeneration in the trabeculæ. In the region where the stroma was free, the fibrous tissue was hard and thick.

#### (b) Tuberculosis of the Suprarenal Body.

The left organ was greatly enlarged and thickened; section revealed a cheesy mass, with the exception of a small portion of the upper pole of the body, which was recognised as normal tissue. In the right supra-renal a firm centre, about the size of a bean, had also a cheesy consistency. The patient was a young man, æt. 34, who died of miliary tuberculosis, with a cheesy mass in the ductus thoracicus, which, apparently, had penetrated from the bronchial glands. The whole history of the case is obscure, and no phenomena of morbus Addisonii are recorded.

### U. IV. Adenoma Capsulatum Renis.

The subject of this post-mortem was a man, æt. 39, who died of tuberculosis. In the centre of the right kidney a bullet-formed mass, about the size of a potato, issuing slightly above the surface, was found, which, on being cut, revealed an area of regular fatty tissue. This swelling, which extended into the pelvis of the kidney, was covered with a distinct capsule, and clearly separated from the renal tissue. The left microscopical specimen shows a section through the margin of the tumour, where a strong fibrous tissue capsule separates the morbid from the normal, and in which a few mutilated glomeruli were found, otherwise the tissue is healthy. The other diagram shows under higher power the same tissue with the capillaries and large spaces, with septa in the fibrous tissue filled with round cells, fatty protoplasm, and a distinctly coloured nucleus. A similar section of the strumous supra-renal tissue (U. III., a.) may be compared with this.

Similar tumours of varying sizes are frequently found at the post-mortem table while intra vitam. No phenomena are recorded to show the development, or that any notable disturbance existed. Formerly, according to Gravit's teaching, such tumours, from their composition, would be classed as renal or supra-renal tissue derived from origin; but the recent publications of Sudeck (Virch. Arch., Bd. 133) make this opinion very doubtful. From the diagram reproduced, the latter view is maintained as a true adenoma.

### U. V. and VI. Sarcomatous Adenoma of the Liver. Adenoma Sarcomatosus Pseudopapillare Renis.

Patient, quartermaster, æt. 50, formerly healthy. Took ill in 1892 with severe pain in the left lumbar region, which at first was light, but continuous. In October it became worse. Pain increased and general weakness, with feeble and unsteady condition of the legs, which went on to complete paralysis the next month—ad motum et ad sentum. In January, 1893, the bladder and bowels were similarly affected. The urine, formerly free from abnormal constituents, now contained pus and epithelial cells from the bladder and pelvis of the kidney. In February, 1893, fever became irregular or intermittent, with rigors, decubitus; rapid emaciation till death took place, in March, 1893, after eleven months' illness from the commencement of the phenomena. (No tumour intra vitam could be discovered in the abdomen.)

#### Post-mortem.

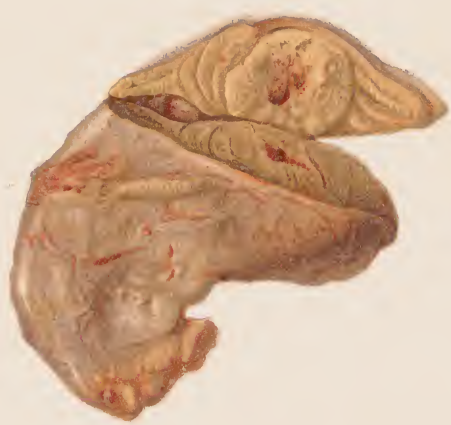
The fatty covering of the left kidney was greatly thickened, but the capsule easily separated. On the surface a slight elevation from the kidney could be observed, which represented a tumour about the size of the fist. These uneven elevations had a grayish-yellow colour and were of soft consistence, and between them the vessels were greatly distended with blood; in the upper and lower part of the kidney similar swellings, about the size of hazel nuts, of the same consistence could be observed. On being cut through, all these elevations were found to be one mass of irregular swelling, extending to the pelvis of the kidney. The individual knobs were not separated by any capsule of the liver, but seemed intimately connected with it; it was cloudy orange colour, and reminded one of the macroscopic appearance and colour described in Fig. U. IV. In parts it was very vascular, with bleeding-points, but in the centre much softened. The pelvis of the kidney much widened. Mucous membrane swollen and cloudy, very vascular, and having an elastic feeling. The left supra-renal body had nothing particular. There were also present analogous swellings in the right kidney, metastasis in the mucous membrane of the bladder, and a large peritoneal mass similar to that found in the kidneys where metastasis also was present. Another elastic mass was found about the tenth or eleventh dorsal vertebræ. Microscopic examination revealed in many places typical adenomatous tissue, as seen from the diagram. The spaces, which are lined with cylindrical epithelium, are separated from each other by fine capillaries. This vascular net of capillaries pervades the whole swelling, but is not seen so readily in its stereometric connection on the slide, but appear rather to have drawn out, giving the impression of papillary growths, whose cavity is lined with epithelium (adenoma pseudopapillare).

In other places the alveolar structure is absent, the cells lying in masses, some round, some spindle shape, and the whole section giving a fair specimen of sarcomatous growth. The tumour may be described as of rapid growth, both macroscopically by the recent elevations on the periphery, and also microscopically from the formation of alveoli and cylindrical epithelium quite in contrast to the tumour shown on Plate U. IV., which is, macroscopically, without capsule, and whose microscopic appearance has retrogressive changes of fatty degeneration in the protoplasm.





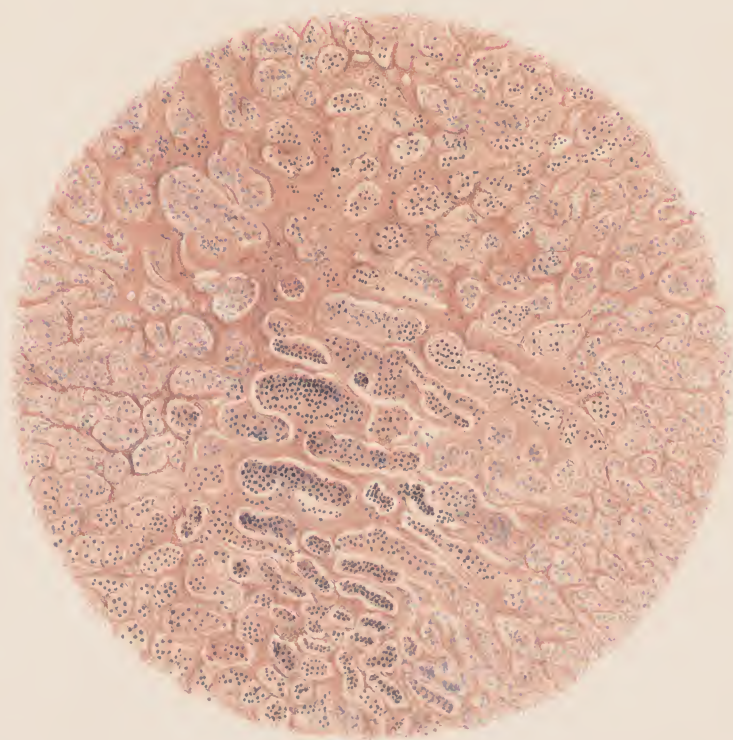




*a*



*b*



*c*

STRUMA SUPRARENALIS.

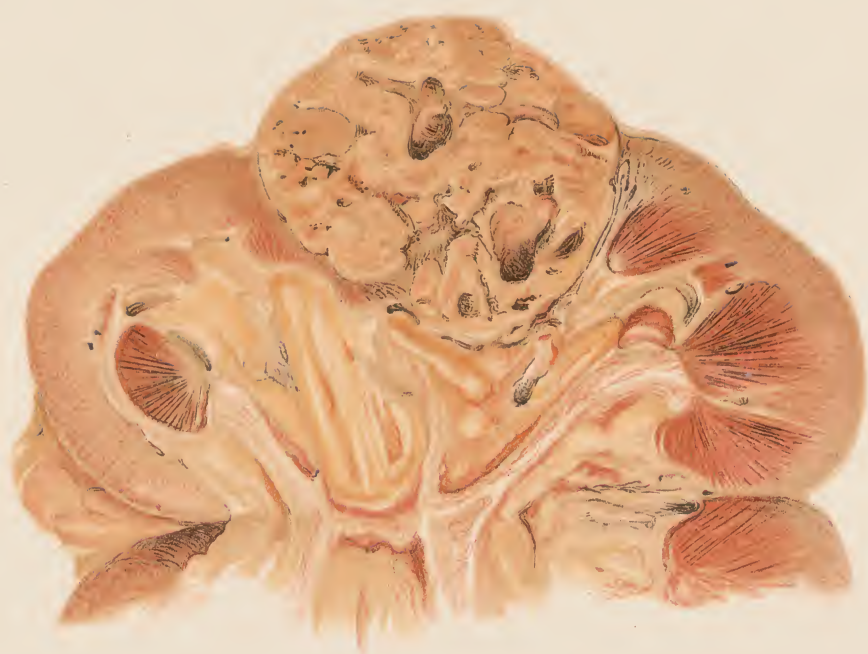
TUBERCULOSIS GLANDULAE SUPRARENALIS.

Gezeichnet von W. GUMMELT.

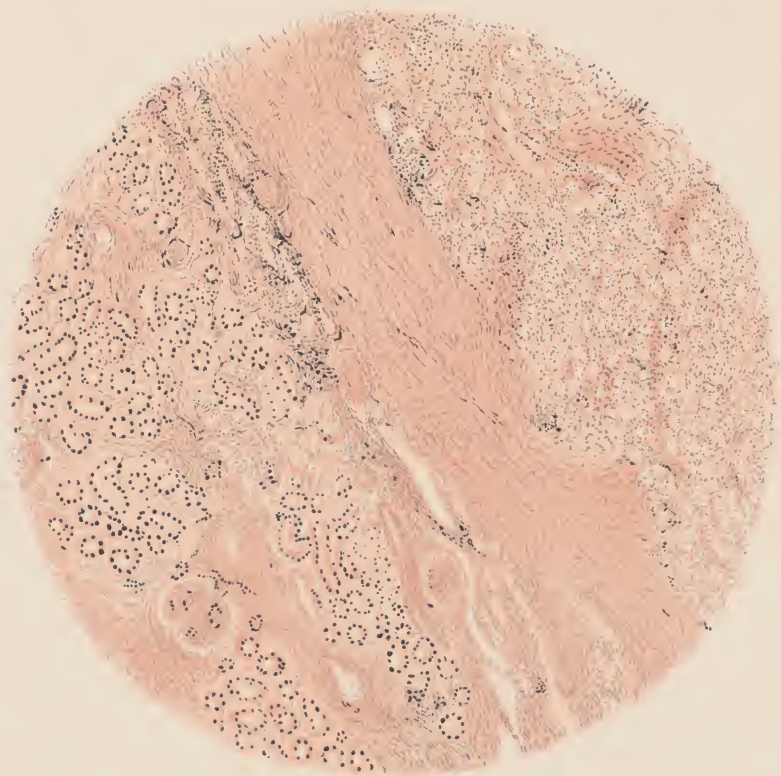




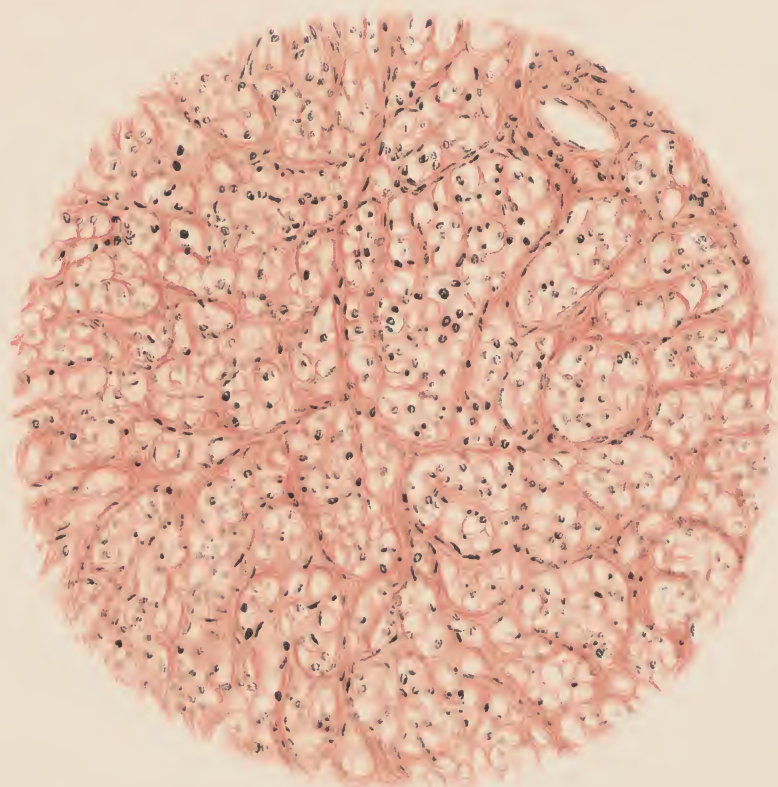




a



b



c

ADENOMA CAPSULATUM RENIS.

Gezeichnet von W. GUMMELT.









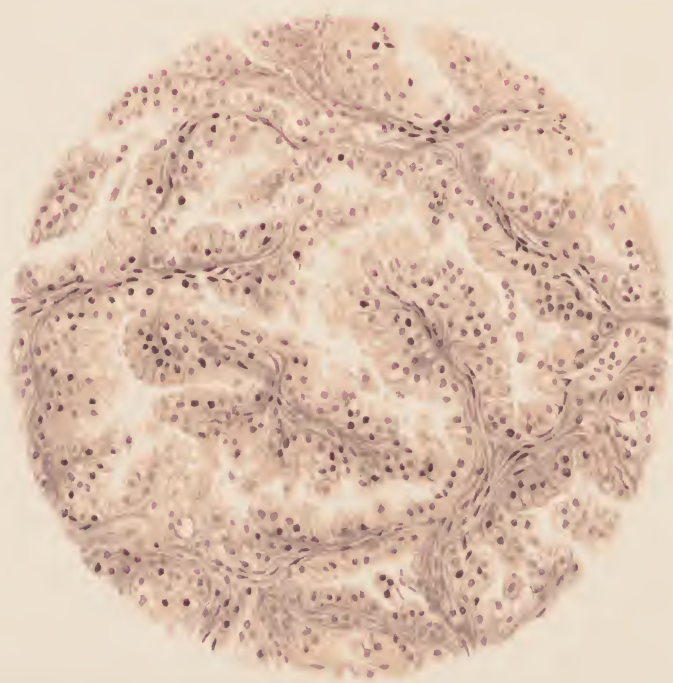
ADENOMA SARCOMATOSUM PSEUDOPAPILLARE RENIS.

Gezeichnet von W. GUMMELT.









ADENOMA SARCOMATOSUM PSEUDOPAPILLARE RENIS.

Gezeichnet von W. GUMMELT.

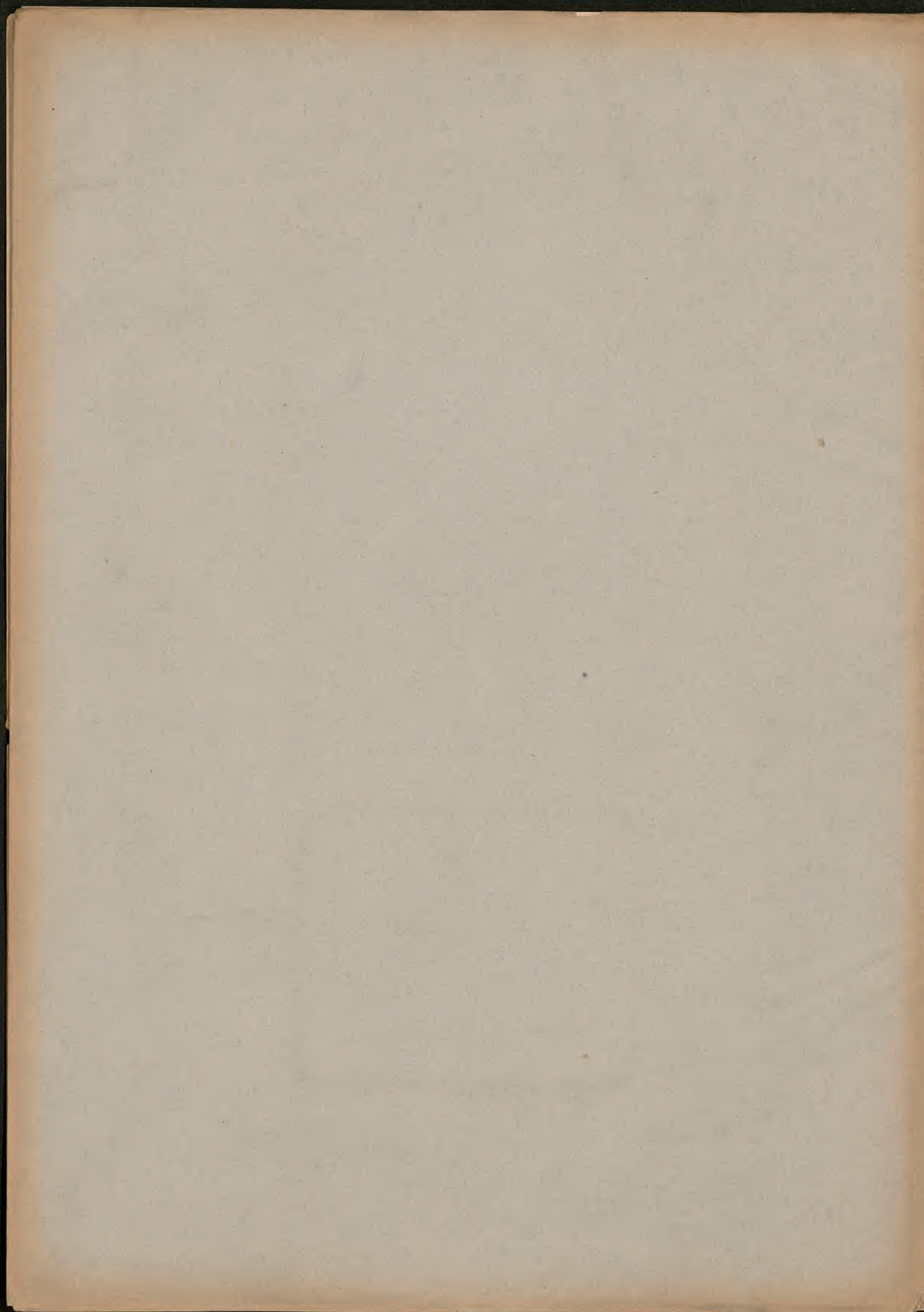














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## PART X.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

### N. I.

#### Acute Suppurative Meningitis.

The subject of this examination, æt. 19, pale, with a good family history and never having had a day's illness until the present attack, was suddenly seized with rigors, high fever, great pain in head, and vomiting, which lasted four days. He appears strongly built and well nourished. Temperature  $39.1^{\circ}$  C. ( $100.38^{\circ}$ ); pulse full, regular, slow (84); breathing shallow and accelerated; the skin and mucous membrane present nothing abnormal. No herpes. There is slight cerebral stupor, but he answers when spoken to loudly. On admission the pain in the head was severe; the vomit watery and of a green colour. Pupils were equal, acting readily to light. Cerebral nerves intact, but there was pronounced stiffness of the neck, and slight pressure on the cervical spinal process gave great pain. No paresis of sensation or motion, beyond a certain amount of hyperæsthesia of the muscles of the calf of the leg. No other disturbance; tendon reflexes intact and reflexes of skin active. Nothing pathological in the heart and lungs. Abdomen soft; spleen distinctly enlarged and tender. Bladder and bowels acted normally. Urine 850 grammes. Specific gravity 1023, containing neither albumen nor sugar.

On the day after admission the stupor increased and the patient became slightly delirious. Temperature  $40.6^{\circ}$  C.; pulse 92. There were clonic contractions of the face, sometimes extending to the muscles of the body. A distinct difference was noticed in the size of the pupils, the left being more dilated than the right, both acting sluggishly to light. Closer examination revealed adherent pupillary margins, but no congestion of the veins of the fundus. The otoscope gave negative results. Over the mastoid process there was neither tenderness on pressure nor œdema. In the evening urine was drawn off with a catheter; it contained neither albumen nor casts. On the third day after admission there was deep insensibility; right pupil fully dilated, being larger than the left, neither reacting to light. Temperature  $40.9^{\circ}$  C.; pulse 96; respiration 60, irregular; cyanosis commencing in the face and periphery of the body. On the following morning, at 6 a.m., on the 7<sup>th</sup> day of his illness, he died, the temperature being at that time  $41.8^{\circ}$ .

#### Post-mortem.

The body was that of a well-built man. The dura mater was greatly distended; on turning it back the convolutions appeared flattened, the sulci containing a thick yellow purulent matter, in which the distended vessels lay embedded. The vault of the flattened gyri presented no pus. This morbid appearance extended from the convexity to the base. The cerebral substance, on section, appeared somewhat dry, and in the white substance were seen many punctiform clots from ruptured vessels. Ventricles greatly distended, filled with a light-coloured turbid fluid. The sinus in the base was free; the anterior fossa and petrous region of the cranium were normal. Dura spinalis free from any changes; the pia spinalis contained a thick greyish-yellow fluid, the neighbouring tissues being dark and infiltrated; these changes were well marked over the posterior part of the spinal cord in its whole length, but were obviously most marked over the cervical and lumbar enlargements; on the anterior surface of the cord the latter sites only were affected. The substance of the cord itself was soft, but retained its form. Hypostasis in the lower lobes of both lungs. Kidneys enlarged; cortical substance cloudy. Spleen large and soft: 14.5 : 10 : 3.5. (Dr Eisenlohr, 1<sup>st</sup> Medical Division.)

### N. II.

#### Tubercular Meningitis with Miliary Tuberculosis.

Subject of inquiry is a young man, æt. 30, without any hereditary taint. Ten years ago he appears to have contracted gonorrhœa, without any inflammation of the testes. For a long time past the patient had observed on the left testicle a hard, painful spot, for which his medical adviser prescribed iodide of potassium, although there was no history of syphilis, without any evident result. For three years past this induration, about the size of a bean, has remained stationary. Within the last two weeks he has become weaker, without complaining of anything in particular; three days ago, after a short walk, he had a severe attack of giddiness, which was followed by pain in the head, which has since kept him in bed. On admission he seemed fairly strong and well nourished; skin and mucous membrane pale; temperature  $37.9^{\circ}$ ; pulse 84, full and slightly dicrotic; respiration 20. Complained of pain in head and sleeplessness. He is somewhat apathetic and stupid looking. No objective symptoms of any particular disease in the central nervous system can be made out. No stiffness about the neck, and the pupils act well. Heart normal. Breath-sounds everywhere clear, apices not consolidated; vesicular sounds clear, no cough or expectoration. Abdominal organs healthy; spleen slightly enlarged, without other obvious change. In the left testicle there is a hard swelling, having the shape of a bean, very tender on pressure. Spermatic cords not thickened. Urine free from albumen; bowels confined. During the next eight days his condition remained unchanged. Fever still continued, with morning remissions, oscillating between  $39.5^{\circ}$  and  $38.5^{\circ}$  C. The pulse is proportionately low, and ranged from 80 to 85; splenic enlargement



remained about the same; no roseola observed, and the bowels remained obstinately confined. Consciousness was dull, and towards evening the patient became restless and even delirious. On the 9<sup>th</sup> and 10<sup>th</sup> day after reception the patient became somnolent; the pupillary reaction was as prompt as before; fundus of eye normal; no stiffening of neck; breathing was laboured and irregular. Over the pulmonary region diffuse bronchial râles were present; nowhere moist. On the 11<sup>th</sup> day paresis of the right external rectus was observed. On the 12<sup>th</sup> day paralysis of the right *upper* eyelid followed by coma and death.

#### Post-mortem.

The body was much emaciated; brain very vascular; dura mater thickened, and separated only with difficulty from the pia mater; gyri slightly flattened; the pia mater was sprinkled with miliary tubercles, and exhibited at various spots in the region of the base a purulent exudation, in which the roots of the nerves were embedded. A large amount of this yellowish-green, jelly-like exudation was found in the region of the chiasma, extending both anteriorly and posteriorly. On opening the Sylvian fissure, a large quantity of pus was found along the vessels, and the pia mater in this situation also contained numerous miliary tubercles.

The cerebral substance was of the usual consistency. The ventricles were not dilated, and were lined with a smooth glossy ependyma. Spinal cord and its membranes not affected. Fundus of eye normal. Lungs nowhere adherent, but both are riddled with miliary tubercles. Bronchial glands swollen, but free from recent changes, presenting neither caseous nor calcareous centres. The same miliary infiltration was found in the spleen, liver, and kidneys. Bladder and prostate free. In the left testicle an old caseous focus, with indurated tissue round its circumference, was found, in addition to a recent eruption of tubercle over the other parts of the testicle. (Prof. Rumpf, 4<sup>th</sup> Medical Division.)

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### N. III.

#### Metastatic Cerebral Tumour.

The subject of this preparation was a woman, æt. 42, who had complained for some time past of severe headache, with all the phenomena of apoplexy. During her short stay in hospital, the right extremities were paretic, sensation impaired, and reflexes feeble. Paresis was also observed in both the right external rectus and facial nerve. The pupils and retinæ of both eyes were greatly congested.

On section brownish-green or dark brown tumours were found, varying in size from a lentil to an apple, the largest of them situated in the left frontal lobe, and reaching almost to the anterior convolution. In the large ganglia and brain centres no tumours were present; spinal cord also free. The primary tumour was found in the left supra-renal body in the form of a large degenerated melano-sarcoma. In different parts of the heart, lungs, spleen, and kidneys, pigmented patches, or metastatic deposits without pigment, were found. The mesenteric and inguinal glands showed signs of sarcomatous degeneration. Microscopic examination showed the tumour to be a melanotic alveolar sarcoma. (Dr. Eisenlohr, 2<sup>nd</sup> Medical Division.)

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### N. IV.

#### Congenital Hydrocephalus.

This preparation was obtained from a boy, æt. 8 months. According to the mother, the child's head was large at birth, and gradually increased in size until death. The circumference of the cranium measured 68 c.c.m. The anterior fontanelle was about the size of the palm of the hand; the sutures wide enough to admit the finger. Death occurred from sheer exhaustion. On opening the cranium, a large quantity of clear fluid was discharged; the brain substance was greatly compressed, and the hemisphere in many places lacerated. The gyri were pressed quite flat, and the sulci scarcely visible. The lateral ventricles were enormously distended; the 4<sup>th</sup> slightly so. The basal ganglia appeared to have been flattened by pressure. The ependyma of the ventricle was soft and glossy, and in it could be seen the glistening much-distended vessels. (Prosector E. Fraenkel.)



N I. —



LEPTOMENINGITIS PURULENTA CEREBRALIS.

Gezeichnet von W. GUMMELT







N 3.



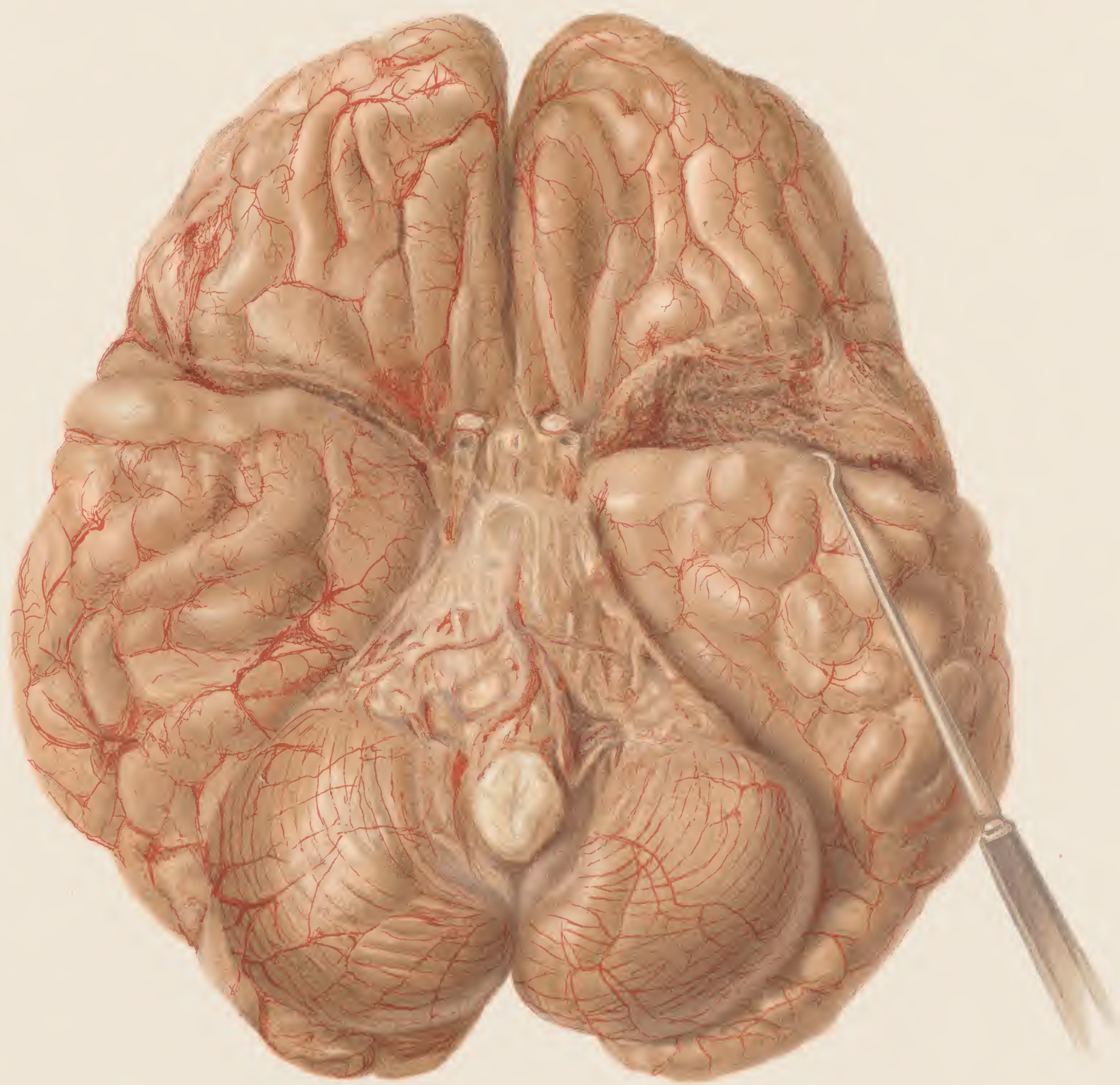
MELANOSARCOMATA METASTATICA CERE BRI.

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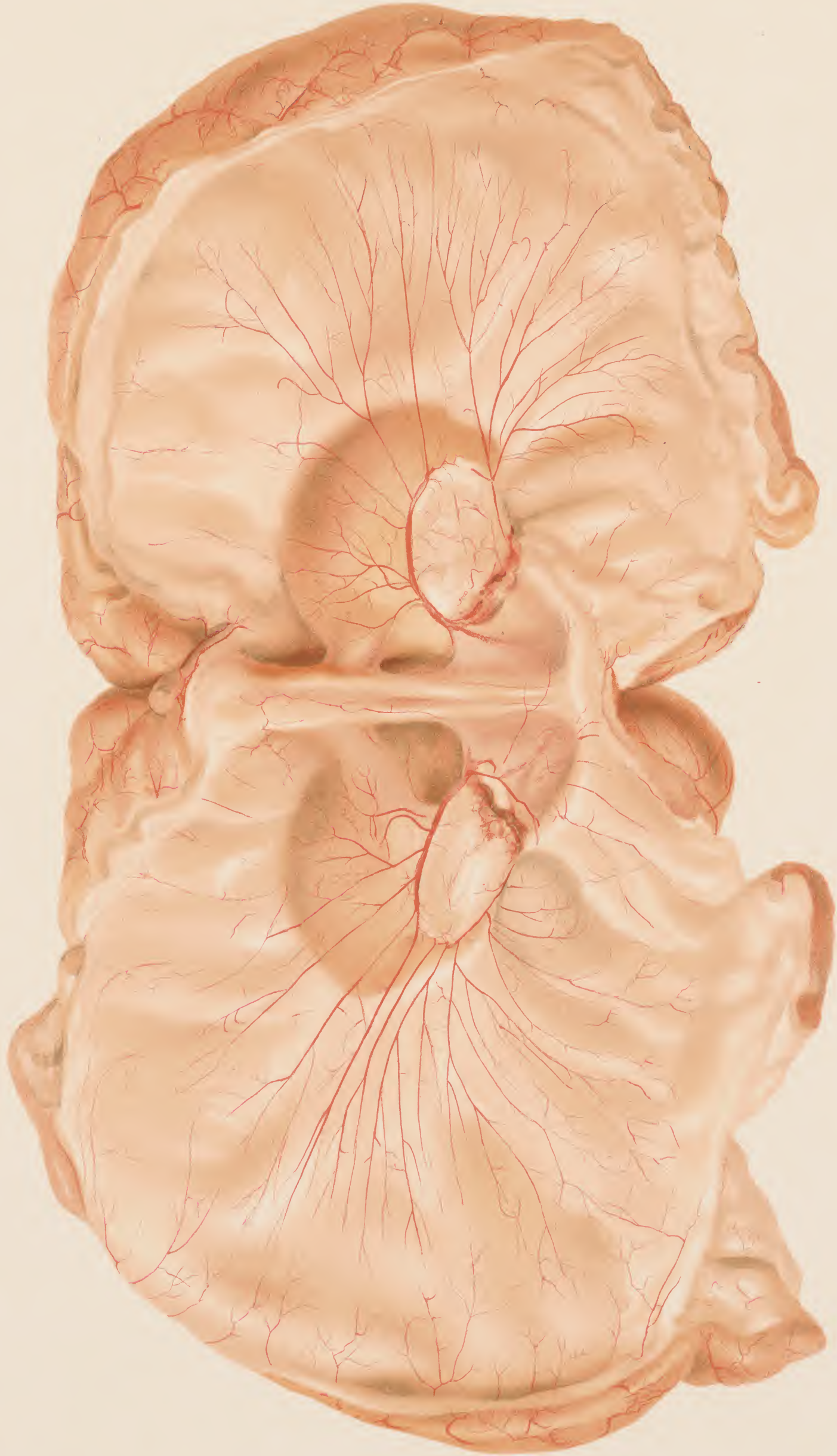
LEPTOMENINGITIS BASILARIS TUBERCULOSA.

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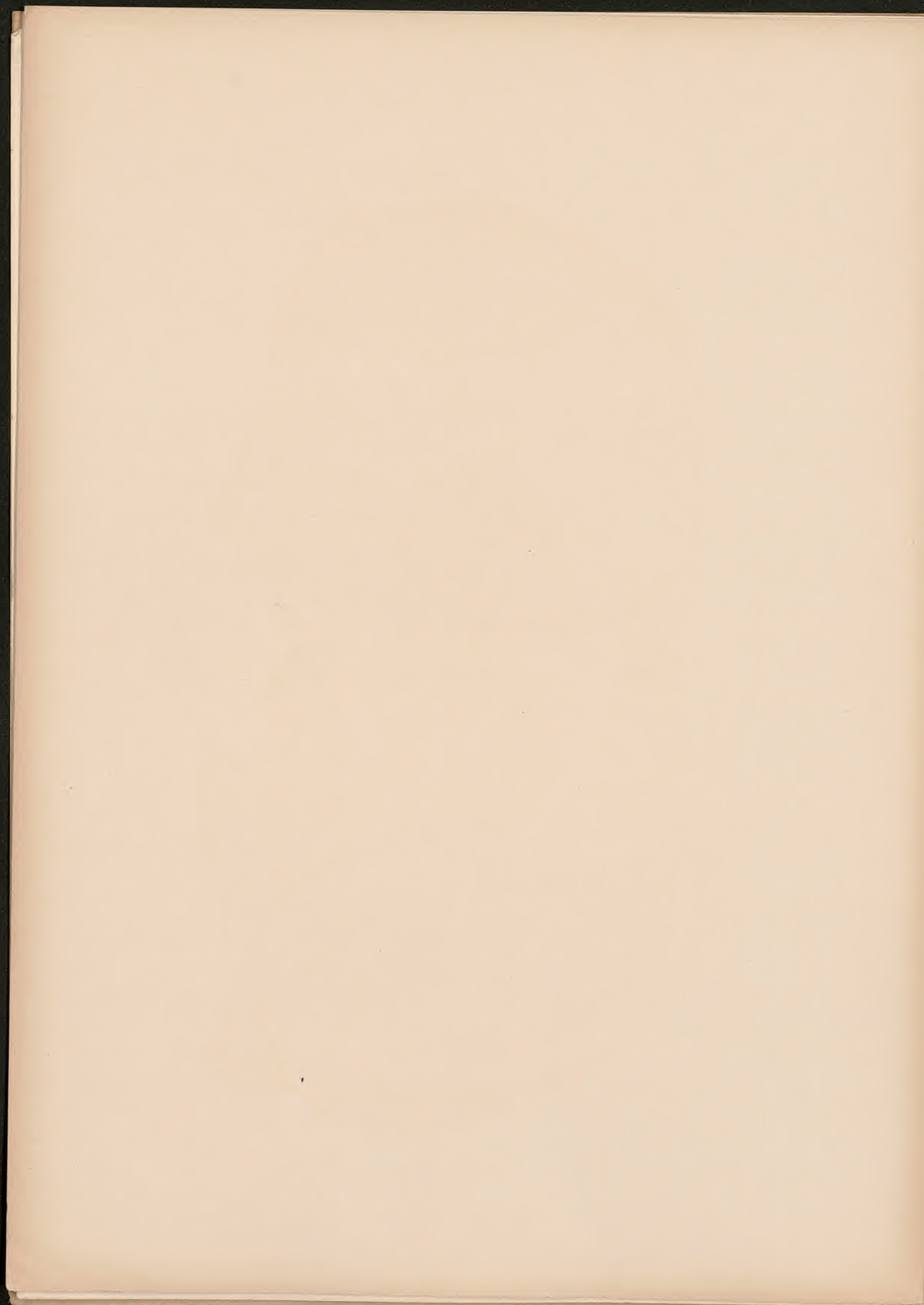




HYDROCEPHALUS INTERNUS.

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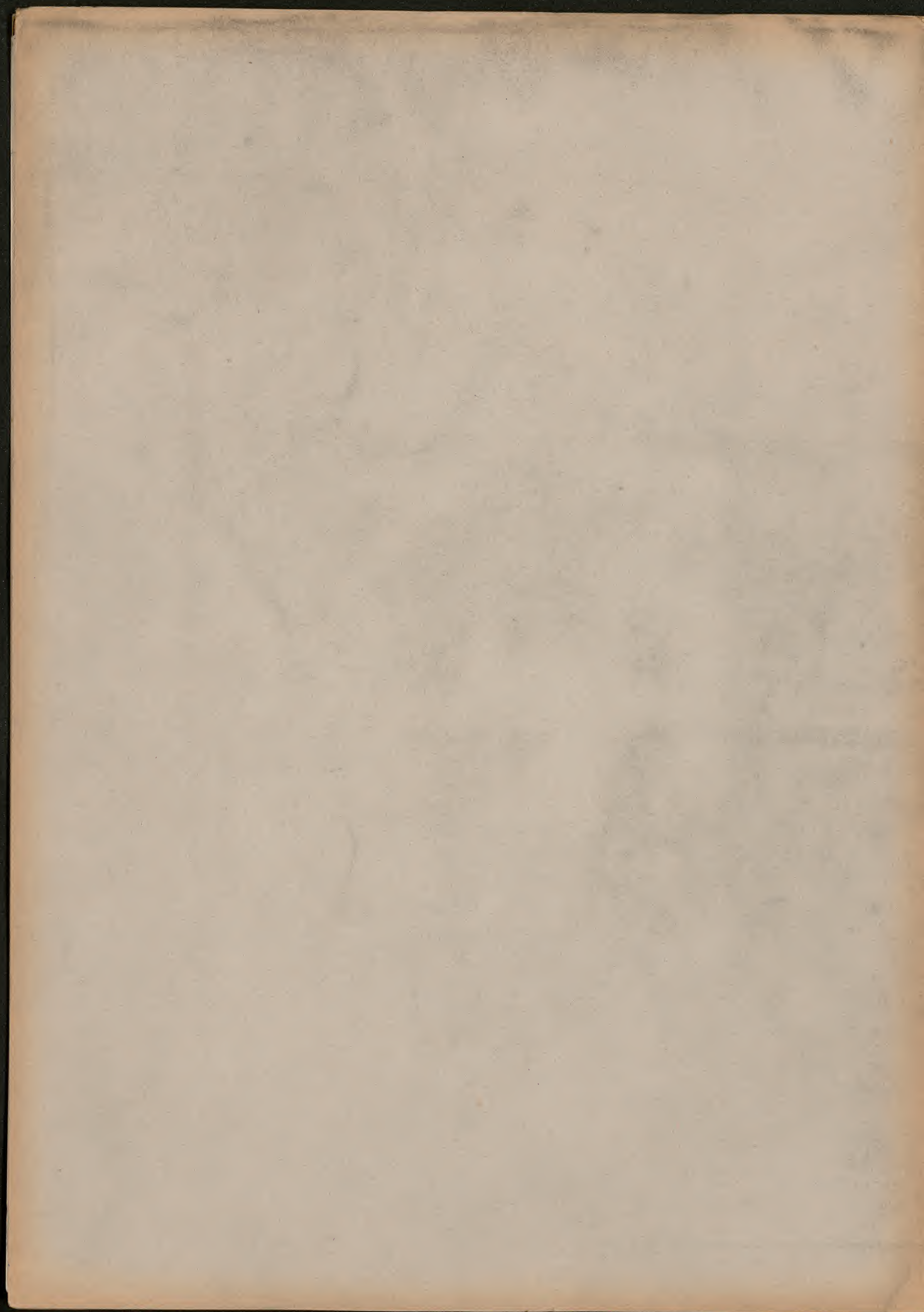














Not to Circulate 187

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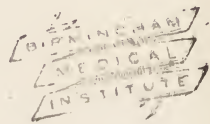


## PART XI.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

### D. III.

#### Phosphor-Liver.



R—, servant-girl, æt. 20, attempted suicide five days ago by drinking a solution of phosphor, which she obtained from three boxes of matches dissolved in water. No untoward symptoms occurred immediately after, but after two days had elapsed she was attacked with diarrhœa; on 4<sup>th</sup> day indefinite pain about the region of the liver, with vomiting; 5<sup>th</sup> day, severe colic and great exhaustion. On same day she was received into hospital, when the following examination was made. She appeared strong and well developed, temperature 38.2° C. (100.6°), pulse 128, respiration 32. Skin and mucous membrane pale and slightly icteric. Mental sopor and restlessness, opening the eyes and answering mechanically. Great pain over the epigastrium, with headache. Cardiac dulness normal, slight systolic murmur at apex, no increase of second or pulmonary sound, action accelerated and regular, while pulse was very small. Lungs nothing abnormal. Margin of liver tender but in no way increased; spleen normal size. Uterus and ovaries nothing special to note; menstruation regular, had occurred eight days before admission; urine clear, 1200 ccm., sp. gr. 1.024, no albumin or sugar, no gall colouring matter, neither leucin nor tyrosin present. Therapeutics: Carlsbad salt per os, and injections, with warm baths. On 7<sup>th</sup> day after taking the poison the sopor increased, great restlessness and frequent vomiting. Stools and urine passed involuntarily. No local symptom due to central nerve system, pupils equal, reacting; temperature 38.6° C., pulse 132. 8<sup>th</sup> day unconscious. Icterus of the skin quite pronounced; hepatic dulness not much increased if anything, but certainly not decreased. Pulse thread-like, temperature 38.5°; in evening, exitus.

#### Post-mortem.

The body deeply icteric; in the abdomen a quantity of dark-yellowish transparent fluid was found. A similar fluid was present in the pleural and pericardial sacs. The liver projecting a finger's breadth below the margin of the ribs. On the heart slight subpericardial hæmorrhage. Endocardium intensely yellow. Beyond this no other morbid changes in the valvular apparatus. Cardiac tissue in no way hypertrophied, but having the same intense icteric appearance, with rapid fatty degeneration, more particularly in the right ventricle. Lungs both œdematous at base, the pleura slightly ecchymosed. Spleen somewhat enlarged, hard, dark-red; Malpighian bodies small. Kidneys enlarged, the capsules suddenly contracting over the cortex when cut; deeply icteric; the cortex incision covered with red points, which under the microscope showed the glomeruli undergoing rapid fatty degeneration. The liver slightly increased, with same yellow colour; dimensions, 26½ cm. long, 18½ broad, 9¾ thick; its consistence somewhat hard, but when cut had a doughy, fatty feeling. The acini almost obliterated, but still could be distinguished, while parts on their periphery were very red, while other parts were of a gray colour. In the gall ducts was found a thick fluid of a purulent character, the gall-bladder containing a small quantity of dark-green gall. The accompanying diagram is an uncoloured frozen section; the hepatic structure can be easily recognised throughout. The liver cells have undergone fatty degeneration, which in the more central parts of the liver show fine fatty nuclei, while in the more peripheral cells of the 'acinus' large fat-drops may be found sometimes almost filling the cells. In the middle zone of the hepatic lobes a large quantity of yellow pigment or gall colouring material is found. Stomach somewhat enlarged, mucous membrane swollen. Over the elevations of the folds of the duodenum numerous small hæmorrhagic points are present, which extend downward into the large intestine. Pelvic organs having nothing particular beyond recent hæmorrhage in the mucous membrane of the uterus, and an old left-sided tubal inflammation. Retro-pharyngeal fibrous tissue covered with hæmorrhagic points; other parts of throat and brain normal.

### D. IV.

#### Acute Yellow Hepatic Atrophy.

Patient, a seamstress, æt. 21, two weeks ago suffered from pain in body, general disturbance, and fever. Beyond this brief history nothing more could be elicited on her reception into hospital. She appeared well built, sensorium cloudy, almost soporific, temperature 38.4° C. (101.12° F.), pulse 120, respiration 32. Skin and mucous membrane of a healthy colour, no icterus. Cardiac examination negative. Over the lungs might be heard several dry bronchitic râles, but no other morbid change. Abdomen sensitive to pressure; no hepatic increase, and spleen enlarged. Examination per vaginam revealed uterine retroflexion firmly compressed by two spherical fluctuating tumours about the size of a fist, which reached to the level of the anterior superior spinous process; ovaries not to be discovered. This examination appeared to give great pain. On 3<sup>rd</sup> day after reception she became intensely icteric, and on examining the abdomen it was so tympanitic that an examination of the organs was impossible. The temperature, which had hitherto ranged from 38.5° C. and 38.8° C., became subnormal, after which she rapidly collapsed, and died on the 5<sup>th</sup> day after admission, or twenty-one days from the commencement of the disease. The diagnosis was given per vitam as purulent exudative parametritis, producing septic poisoning with icteris.

#### Post-mortem.

Well-defined pelvo-peritonitis, bi-lateral purulent parametritis and oophoritis. Ecchymosis in the pleura, pericardium, and peritoneum. Fatty degeneration of the heart and kidneys. Liver greatly atrophied, more particularly in its thickness; dimensions, 23 cm. long, 15 cm. broad, and 5½ cm. thick. The capsules soft and puckered, having a reddish colour, with numerous vessels shining on its surface. On section with a knife had an ochre colour surface; the outline of the acini obliterated, although in several places dark and yellow coloured patches might be distinguished. Its consistence was very brittle, so much so that when a gentle stream of water fell on its cut surface it would wash away a large portion of the parenchyma. In the gall-duct a small portion of yellow fluid was present; gall-bladder empty. Microscopic preparations were difficult to harden and prepare, taking up the colour badly, but they showed great destruction of liver tissue, scarcely to be



recognised. Parts were undergoing fatty degeneration ; in others, a granular detritus was to be seen, washed together in a mass, the liver cells obliterated, their contour and nucleus indistinguishable. In several places a fine net of filiform needles could be observed (tyrosin). Macroscopically, the intense yellow colour of the liver cells is still maintained, but along with this may still be observed granular fatty drops.

---

## D. V.

### Acute Yellow Atrophy of the Liver (II.).

This patient is a servant-girl, æt. 15, who had formerly enjoyed good health till within the last half year, when her menstruation became troublesome, with pain and swelling of the body. Two weeks ago she was received into the 'Krankenhaus' with all the phenomena of gastric and intestinal catarrh. On examination, she was found to be well developed for her age and strong-looking ; face rather pale, slightly icteric, but no fever. The abdomen was regularly distended, and painful to pressure. The principal examination under narcosis was the genital organs, which appeared normal ; all the other organs seemed in a healthy condition. During the following six days she had slight evening elevations of temperature, rising to  $37.7^{\circ}$  and  $37.8^{\circ}$  C. ( $100.4^{\circ}$  F.), but no definite pain, though listless, and no appetite. The uterus and mucous membrane became more pronounced and the skin slightly yellow. On the 7<sup>th</sup> day she became much worse, temperature rising to  $39.4^{\circ}$  C., with profuse hæmorrhage from the vagina. During the two following days the temperature rose to  $40^{\circ}$ , with excited delirium ; icterus increased ; small hæmorrhagic points in the skin, with the spleen enlarged. She then fell into a soporific condition, the temperature falling to the normal, and died three days later in deep coma, or six days after admission.

#### Post-mortem.

Icterus intense, numerous hæmorrhagic spots in the skin, bilateral hydro-thorax and hydro-pericardium ; ecchymosis of the pleura and epicardium ; advanced fatty degeneration of the cardiac muscle, ascites ; spleen enlarged, breadth 18 cm., width 9, and thickness 4 cm., with cloudy swelling of the kidneys ; the microscope revealed fatty condition of the epithelium. The uterus was infantile, with hæmorrhagic endometrium ; the liver was greatly reduced, being 880 grammes, the right lobe measuring 16 cm. in length, 12 in breadth, and 7 cm. in thickness ; left lobe, 11 in length, 9 in breadth, and 2 in thickness ; the surface covered with folds of a dirty reddish colour ; its consistence soft, and on cutting with a knife the surface had a pale rose colour, with isolated centres of fibrous tissues, the upper part having an intense ochre colour. In some parts of the right lobe thicker bands of red tissue was found, while the left had more of the yellow colour. The microscope revealed in a preparation from the ochre part large portions of fatty matter, with quantities of destroyed cells, detritus and tyrosin crystals ; on the other hand, those taken from the red part contained fine fibrous tissue, but the hepatic cells were absent. The accompanying diagram shows a section from the margin of both forms of tissue, the left, corresponding to the intense yellow part, filled with a granular mass, where some loose liver cells may be seen approaching a normal condition ; on the right will be recognised the red fibrous structure of a friable nature, with numerous gall-ducts and vessels. The liver cells are in this evidently advanced part of the morbid process perfectly destroyed, but after the absorption of gall detritus there is only the trabecula of the organ left. The proportionately rich supply of blood-vessels gives the appearance of a more or less intense red colour to the structure (red atrophy).

The three plates, D 3, D 4, and D 5, represent the disease in the various pathological stages of the morbid process, which commenced with fatty degeneration of the liver cells, leading on to complete destruction. In the first stage of the disease (D 3) the liver cells are swollen, cloudy, and variously filled with fat-drops ; the somewhat increased organ has then an approximate colour to common fat. In the second stage (D 4) the liver cells are converted into a granular fatty detritus, bringing about a reduction and darker colour of the organ. The third stage exhibits the pale-reddish colour as shown in D 5. The remaining part of the destroyed cells are completely absorbed, and only the fibrous tissue forming the trabecula of the liver remained. The accompanying brief historical sketches tend to show the different etiology of a similar process. In the first case recorded the morbid change was produced by a toxic agent in the form of phosphor degeneration. The second case of acute yellow atrophy was induced by infection brought about by septic changes in another part of the body. The third case, that of primary yellow atrophy of the liver, still stands out as a morbid condition, without any clear explanation of its origin.

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## D. VI.

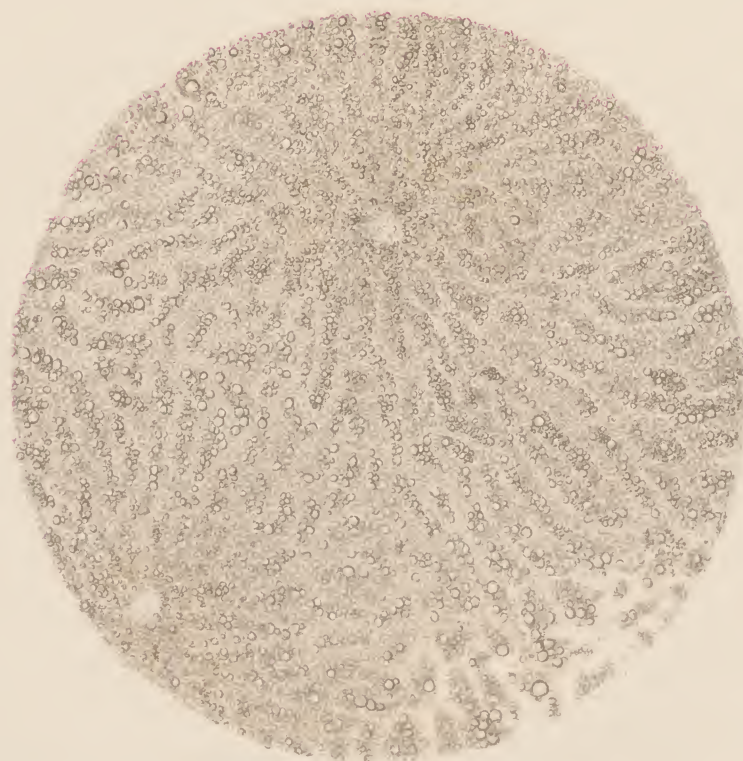
### Syphilitic Liver.

The object of the following case was a young man, writer, æt. 38, who complained of chronic nephritis, and died from uræmia. When sixteen years of age he acquired syphilis, and was treated by a quack. The local symptoms seem to have receded till he reached his twenty-second year, when iritis appeared, followed by a discharge from both ears, which led to complete deafness. On his reception into hospital the phenomena of dropsy were so pronounced that an exact examination of the liver-dulness could not be followed. No symptoms of hepatic disturbance were observed during life. From earlier syphilitic infection posterior synechia of both irides and neuritis optica was observed.

In the post-mortem, general dropsy was noted ; shrinkage of the kidneys ; hypertrophy of the left ventricle, with myocardic bands in the cardiac tissues ; indurated lymph glands, smooth cicatrices on the tongue and pharynx. Quoting from the journal, 'The liver is spotted ; in one convolution small and large globules are metamorphosed ; in the bifurcation between these bodies lying to the right side is a yellow peritoneal band. On section the liver was brown and atrophied ; a part taken from the liver-substance at the bifurcation is found irregularly arranged with thick fibrous tissue, and forming large concentric rings like islands, but connected with the same tissue. In the neighbourhood the acini are small, atrophied, while those in other parts, especially in the region of the larger lobes, are found to be of normal size. No small-celled recent infiltration ; no amyloid reaction. Gall-bladder greatly shrunken, thick, surrounded by bands of fibrous tissue.'



D III.—



DEGENERATIO HEPATIS ADIPOSA. (INTOXICATIO PHOSPHORICA.)

Gezeichnet von W. GUMMELT.







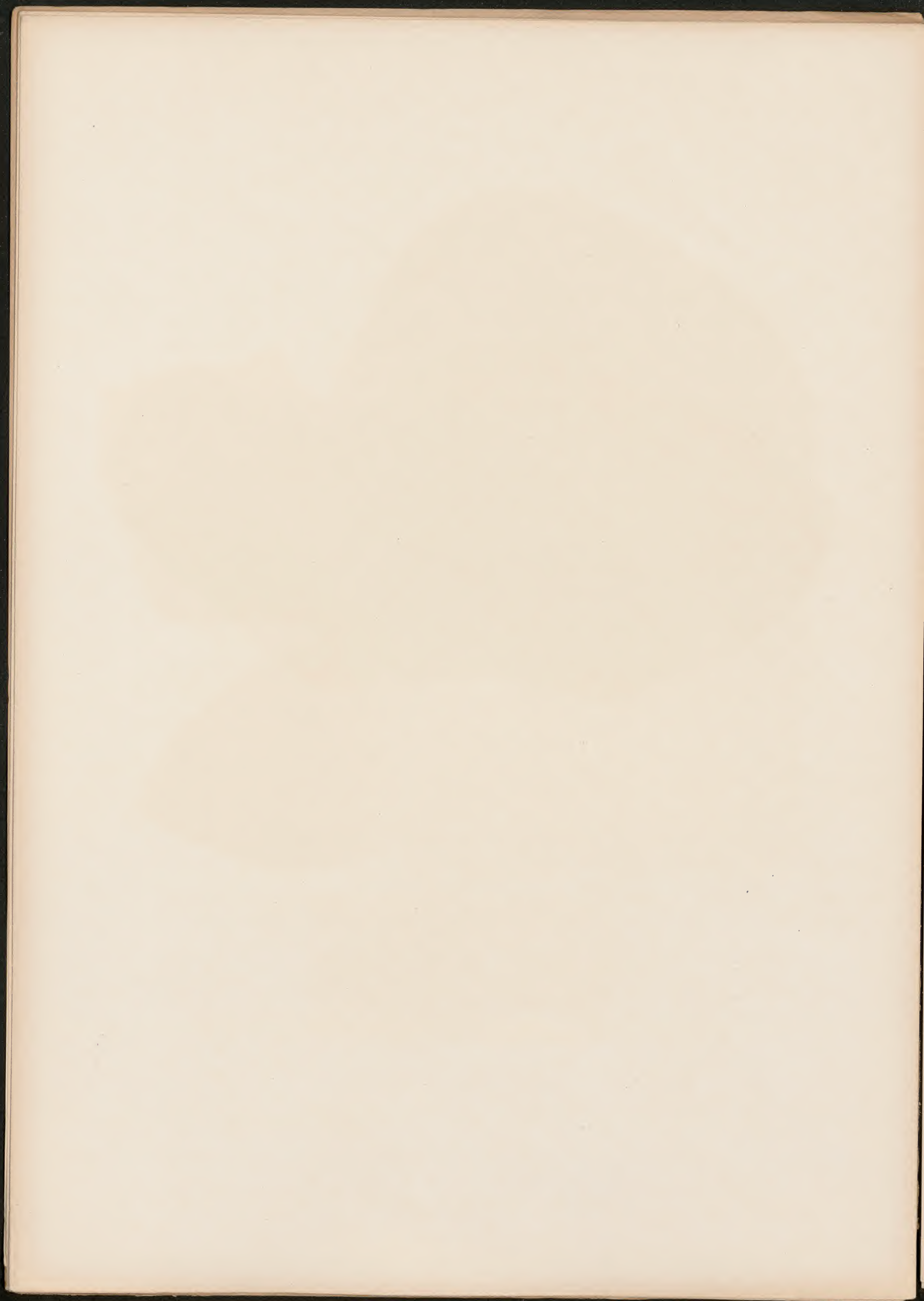
D IV.—



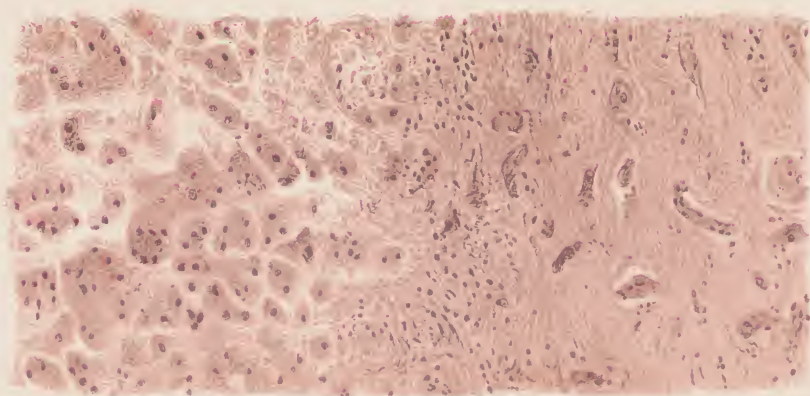
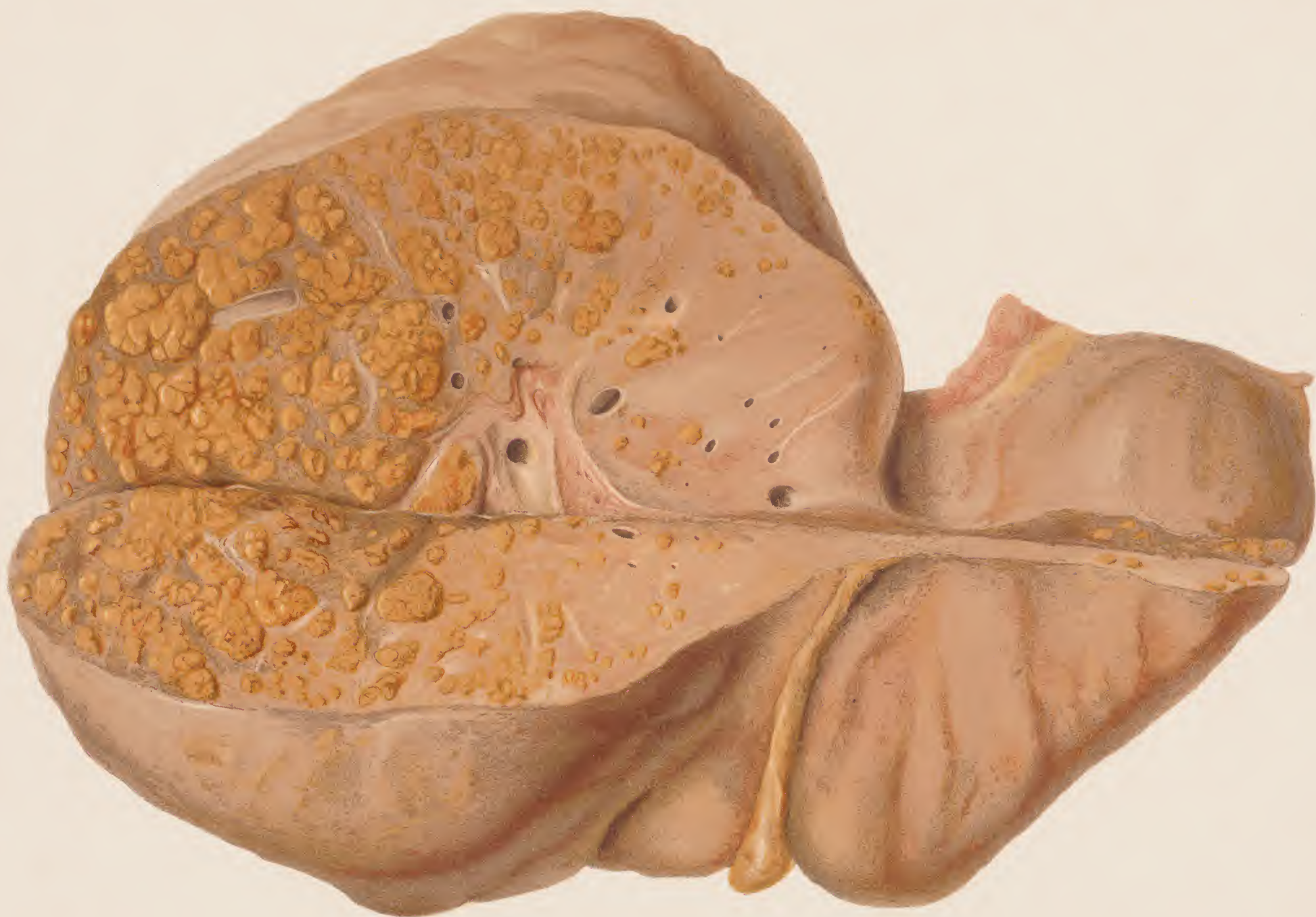
ATROPHIA HEPATIS ACUTA FUSCA.

Gezeichnet von W. GUMMELT.









ATROPHIA HEPATIS ACUTA. II.

Gezeichnet von W. GUMMELT.







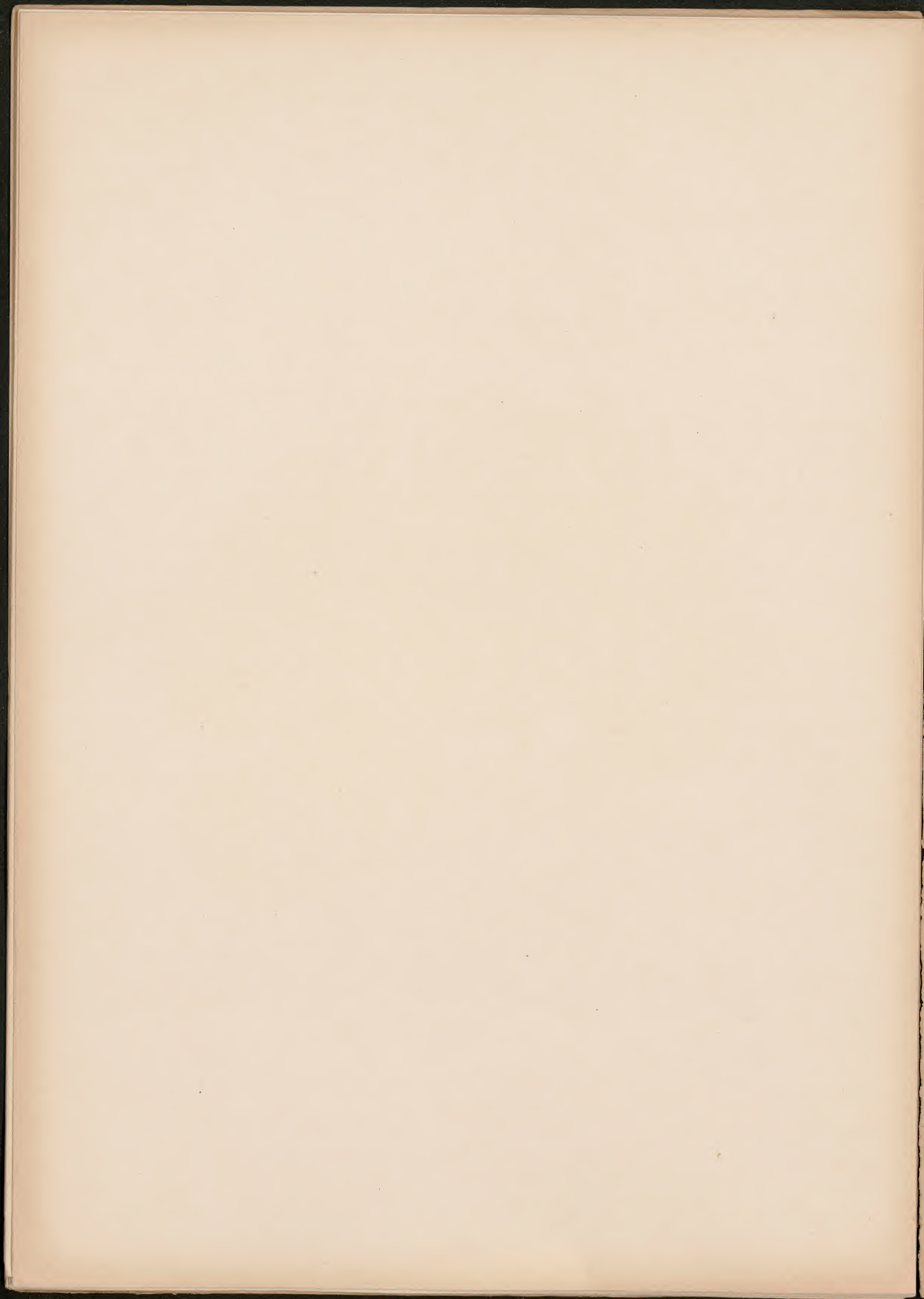
D VI.—



HEPATITIS INTERSTITIALIS SYPHILITICA.

Gezeichnet von W. GUMMEL.

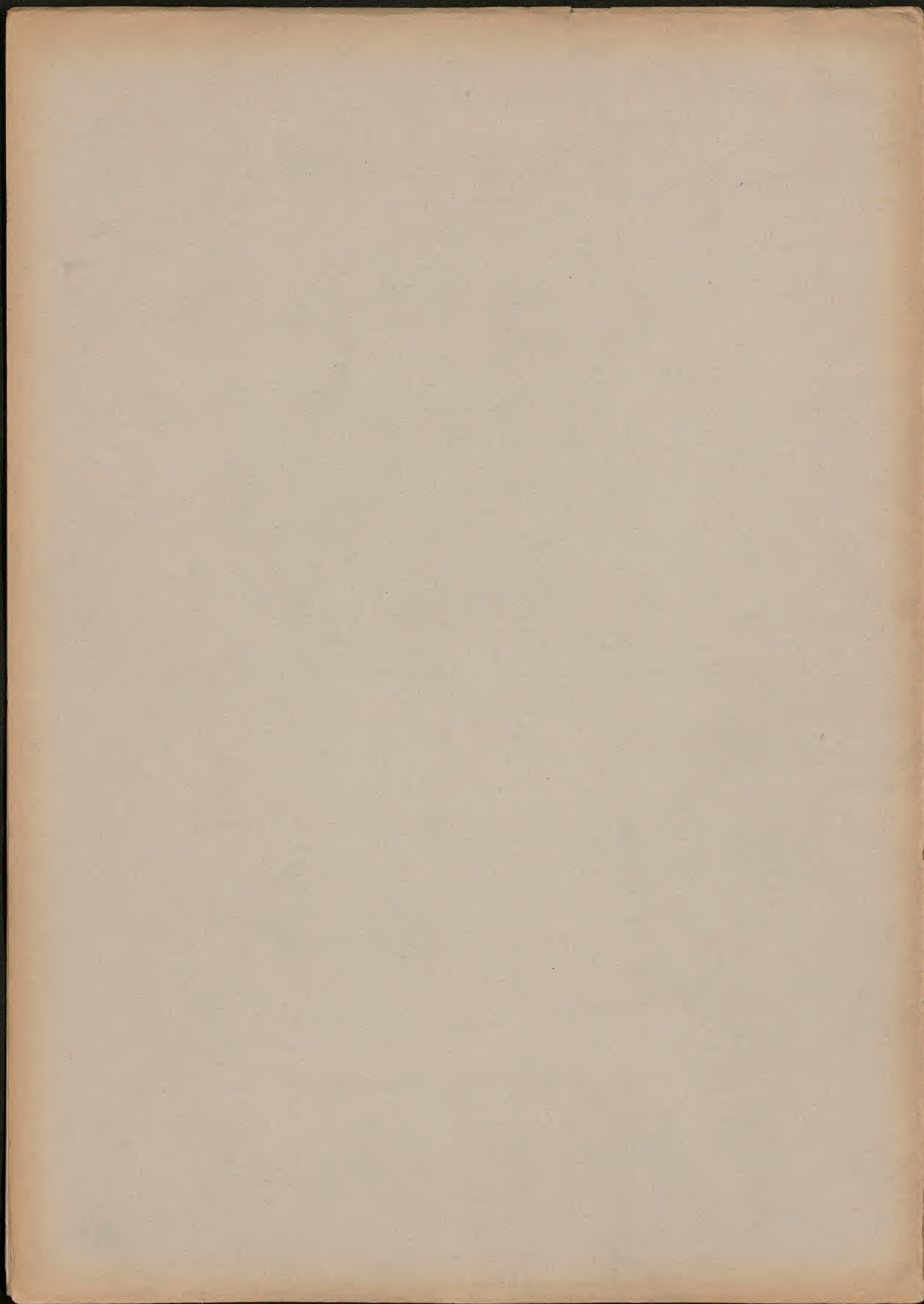














# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY

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immediately after death.

With descriptive text by

PROF. D<sup>R</sup>. ALFRED KAST,  
Professor of Clinical Medicine, (Breslau)

and

D<sup>R</sup>. THEODOR RUMPEL,  
Chief physician at the New General Hospital, (Hamburg).

English Edition

revised and edited

by

M. ARMAND RUFFER M. D. OXON.

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PART XII.

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## PART XII.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

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### F. XVIII.

#### Large Gastric Ulcer with Carcinomatous Degenerative Margin.

The following is a woman, æt. 46, who suffered from acromegalia, and who died with the phenomena of cachexia. In an earlier gastric affection there was no dementia met with in the history. The clinical condition of the symptoms pointed to a distinct enlargement of the stomach.

##### Post-mortem.

On opening the abdomen the enormous stomach reached to the symphysis pubis, covering the whole of the mesentery. The region of the pylorus was deeper than usual, and thicker with peritoneal adhesions to the liver, pancreas, omentum, and duodenum. Owing to these attachments it was impossible to remove the organ *in situ*, and therefore it was opened along the great curvature; the pylorus was narrow, not admitting the passage of a finger. The stomach, owing to the neighbouring adhesions, was tensely stretched out. Between the pylorus and cardiae there was found a large oval defect in the mucous membrane, whose length measured 12 ctm., and was 6.5 ctm. broad, and its longest diameter at right angles to the smaller curvature. The margin of this ulcer in the greater part of its circumference was sharp, hard, and smooth, in some places distinctly terrace form, descending to the base. On the margin towards the pylorus there was a distinctly cockscomb formation of a soft consistence, which on being cut proved medullary tissue; the examination with the microscope revealed typical cancerous cells in nests, which were found to extend a good way into the healthy mucous membrane. The other margins of the ulcer showed no carcinomatous structure. The base of this large ulcer was formed by the denuded pancreas, whose serous covering appeared at the bottom; in one portion the substance of the liver could be discerned, which had become soft and pulpy through the action of the gastric juices. On removing the stomach from this portion from the left lobe of the liver a hole about half a centimètre deep was found, and the tissue around scarcely recognisable as hepatic. The remainder of the mucous membrane in the stomach was thin and atrophied. The serous membrane of the anterior wall of the stomach in the region of the ulcer was flabby, with nodular warts on it. The glands of the epigastrium were the size of beans, hard, and when cut had a grayish colour, in which might be seen fine granular nodules. The duodenum at its commencement was in contact with the ulcer by means of its serous covering, and was firmly adherent. Further continuation of the post-mortem revealed a tumour on the hypophysis.

N.B.—On the left side of the diagram to the reader a great part of the large curvature of the mucous membrane of the stomach may be seen. In the middle of the figure a quadrilateral opening shows the cardia of the organ. The carcinomatous degenerative part of the ulcerating margin lies to the right and lower part of the observer; in the bottom of the ulcer to the right is the pancreas; to the left the liver.

---

### F. XIX.

#### Diffuse Colloid Cancer of the Stomach.

The present subject is a woman, æt. 63, who died in hospital. For the last three years she has complained of great pain in the stomach, which within the last month has become more severe, with vomiting and great emaciation. On admission there appeared to be great resistance over the region of the epigastrium, but no tumour could be discerned by the most delicate handling.

##### Post-mortem.

The mucous membrane of the stomach throughout its whole extent is greatly infiltrated, and in one place about a finger's breadth of this sheath is spongy, elevated, and grayish in colour, which when cut through has large and small colloid recesses in the tissue. The upper surface of the mucous membrane has elevated plains, with bifurcating recesses, one deep and broad running across the small curvature of the stomach from the œsophagus to the pylorus. It is nowhere ulcerated, and nothing further particular to note beyond a few blue warty excrescences, with hæmorrhagic extravasation on the anterior wall. The stomach is not enlarged; the pylorus will admit the passage of a lead-pencil. The muscular sheath of the stomach at Par's pylorica, which is free of any cancrroid matter, is greatly hypertrophied. The microscopic appearance of the new growth is a soft fibrous trabecula of fibrous tissue; in several places the interstices are filled with cancerous cells containing within the spherical mass a clear drop. In other places these meshes are empty, or may be filled with a glassy homogeneous mass. The morbid process is limited to the mucosa and submucosa; metastases were not observed any other where in the post-mortem.

---

### F. XX.

#### Medullary Cancer of the Stomach.

The following is a woman, æt. 35, who had always enjoyed good health up to nine months ago, when she was attacked with pain in the stomach, frequent vomiting and rapid emaciation. Five months ago the patient tells us that she observed a hard swelling about



the size of a hen's egg on the right side above the navel. At this time she consulted a surgeon, who operated in the 'Krankenhaus,' but which, according to her own expression, was without any benefit. About four weeks ago her condition became intolerable with pain and unceasing vomiting. The day prior to her admission she attempted suicide by cutting the radial artery. The report on admission was great emaciation, and almost in extremis; temperature,  $36.0^{\circ}$  C. ( $96.8^{\circ}$  F.); pulse,  $120^{\circ}$ ; dirty pale-coloured skin; mucous membrane very pale, and slightly icteric; over the left radial artery a freshly-stitched irregular skin-wound; œdema at the ankles; lung and heart without morbid change; abdomen somewhat distended; coverings soft. In right epigastrium a smooth cicatrix from operation; liver and spleen no way increased. Below the left lobe of the liver a hard elevated painful tumour about the size and form of a large pear, with its smaller pole towards the right, is present. It is easily moved, and from the soft walls may be caught up between the fingers. The organ is no way enlarged. Patient constantly vomiting masses of mucous membrane, in which the acids of the stomach cannot be found, while the urine contains a trace of albumin.

#### Therapeutics.

Nutrient clysters; ten drops of a 5 per cent. solution of cocaine several times a day. On second day after admission she died.

#### Post-mortem.

The tumour, when cut down to, was larger than anticipated. It was situated over Par's pylorica of the organ, and extended conically over the neighbouring structures of the stomach, of which it involved one-third of the mucous membrane of the whole organ. The principal part of the mass has an irregular surface, polypoid in form; the individual elevations are smooth without any ulcers, but engorged vessels traverse the surface with bleeding points; the whole is of a spongy consistence, and when cut has a regular yellowish-white medullary substance. In the region of the pylorus, evidently the oldest part of the tumour, a small ulcer is found, with a smooth carcinomatous base in the submucosa. Around the neoplasm the muscular tissue is greatly hypertrophied. The rest of the mucous membrane of the stomach, as well as the œsophagus, was greatly swollen and congested, the epithelium being notably thickened. The microscopic examination of the neoplasm located its origin to the mucous and submucous structure, which was quite transformed; the new tissue was an atypical granular epithelium in the form of firm cancerous fibres lying embedded in a finely-developed fibrous stroma. Further investigation discovered a number of cancerous metastases in the peritoneum; there were also a few in omentum and liver.

---

## F. XXI.

### Venous Enlargement in Œsophagus from Hepatic Cirrhosis.—Perforation.—Death from Hæmorrhage.

The following preparation was obtained from an architect, æt. 53, who had always enjoyed good health till within a few weeks before reception into hospital, when he was attacked with general malaise, loss of appetite, and indefinite pain in the lumbar region. The objective examination was conducted with difficulty owing to the enormous quantity of fat, but no morbid changes of the organs could be discovered. On the second day after reception he suddenly vomited a great quantity of thin, dark-red blood; in the stools similar large quantities of dark blood matter were discharged; on the following day great anæmia and death.

#### Post-mortem.

In the lower part of the œsophagus a greatly-distended serpentine vein was found ruptured, out of which, as the observer will see from the diagram on his right, projected a dark-red blood clot, which being washed away, a small smooth valvular opening, about the size of a large pinhead, was discovered in the vessel. The same distended form of vessel was found in the mucous membrane of the stomach, and more particularly in the cardiac region, where these vessels were enormously large. The mucous membrane of the entire organ was atrophied, of a dirty gray, greenish colour, with a number of old pigmentary patches. The primary cause of this venous congestion in the œsophagus and stomach was traceable to a formerly-described hepatic cirrhosis.

N.B.—The figure opposite is two-thirds the natural size of the original.

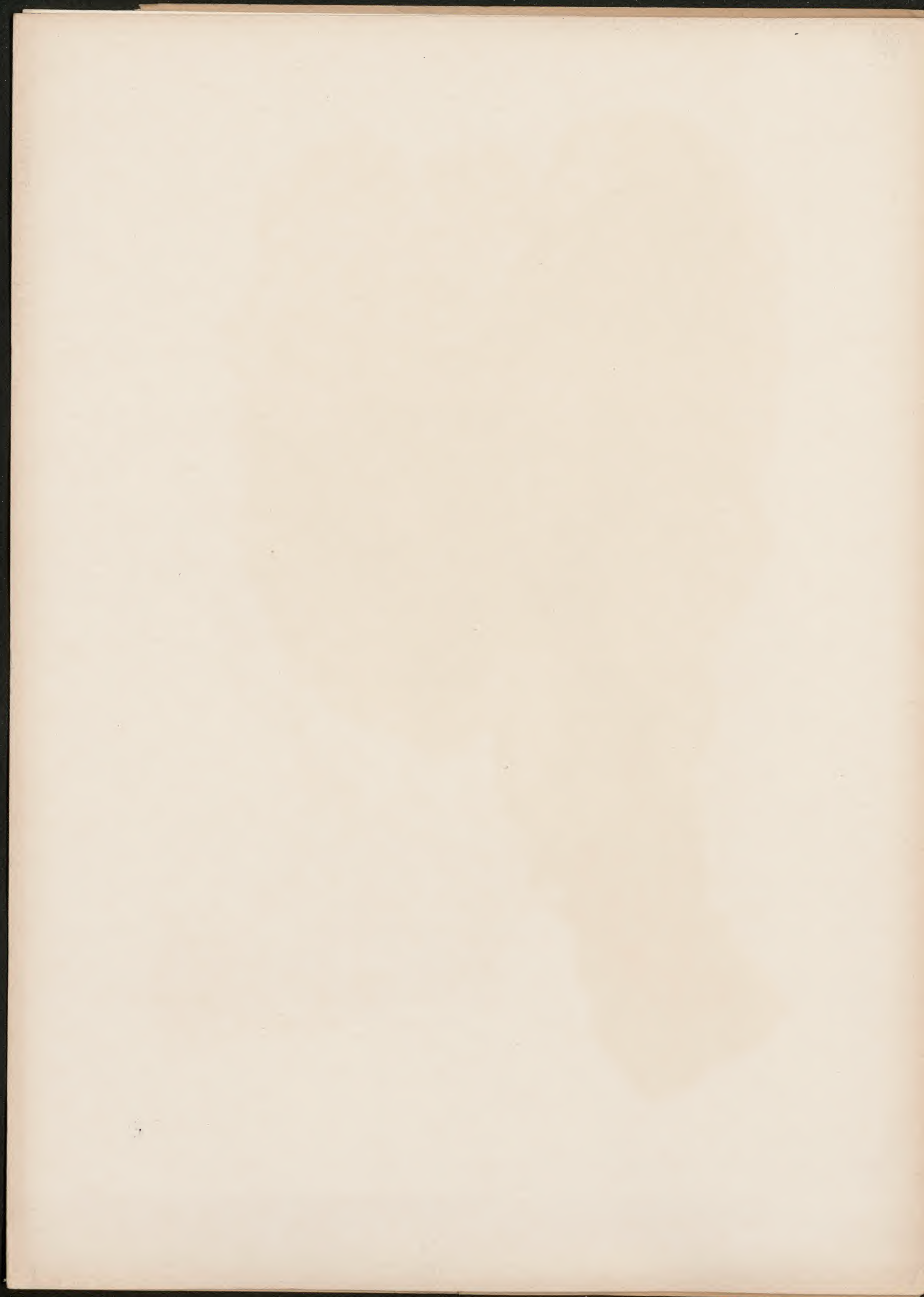




ULCUS ROTUNDUM VENTRICULI PERMAGNUM.

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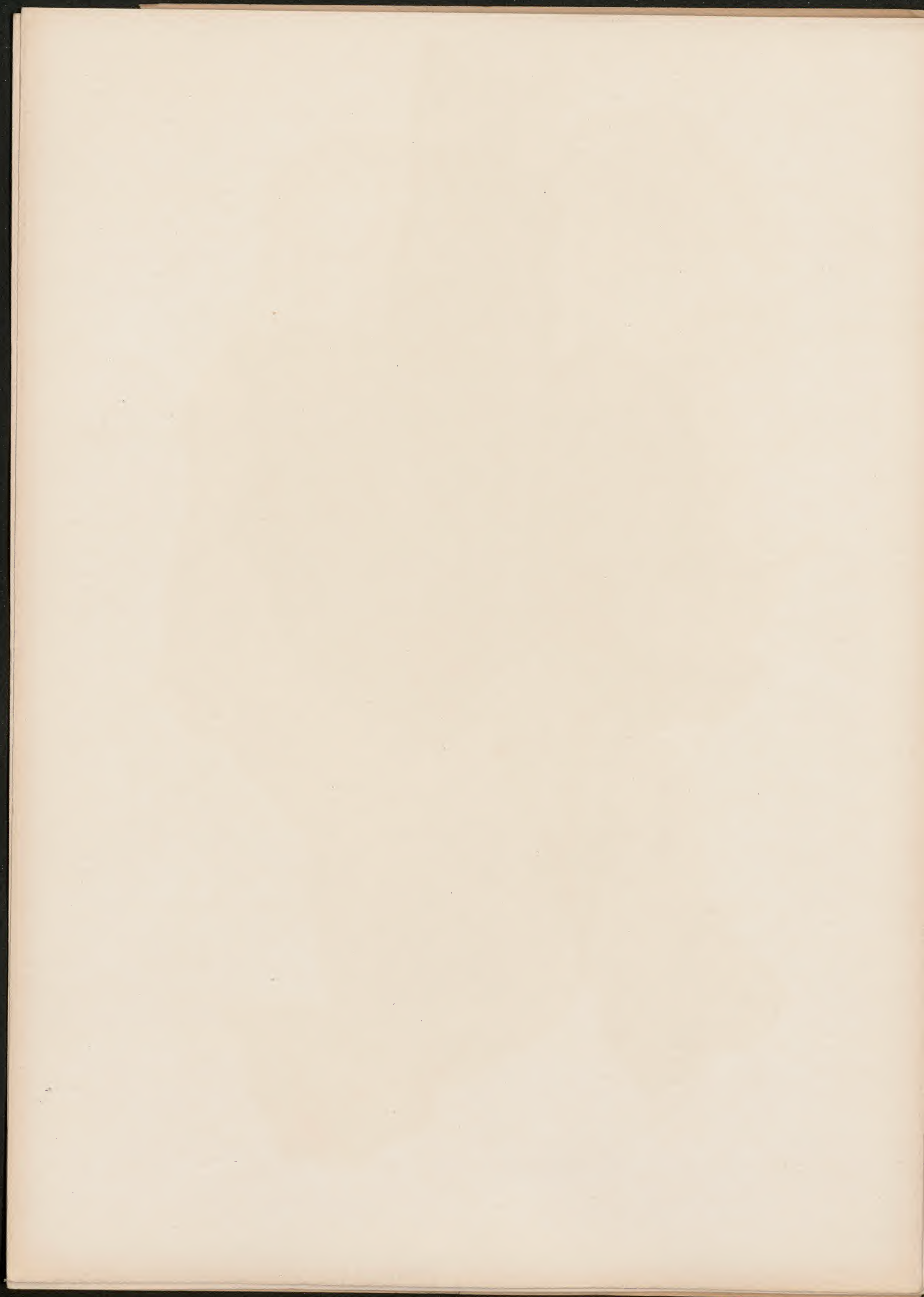




CARCINOMA SCIRRHOsum DIFFUSUM VENTRICULI.

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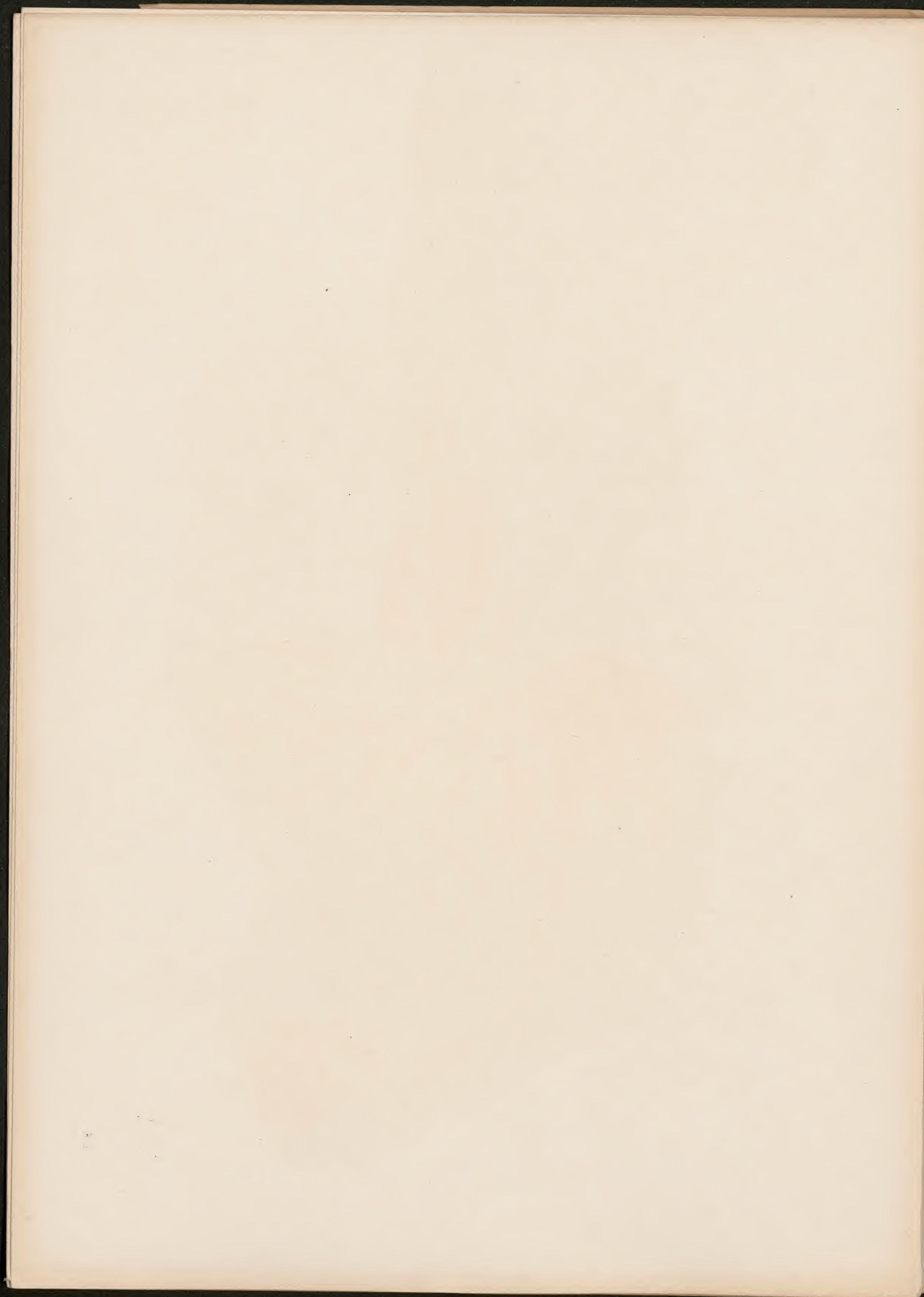




CARCINOMA SCIRRHOsum VENTRICULI IN VICINITATE  
ULCERIS ROTUNDI CICATRICATI ORTUM. STENOSIS PYLORI.

Gezeichnet von W. GUMMELT.







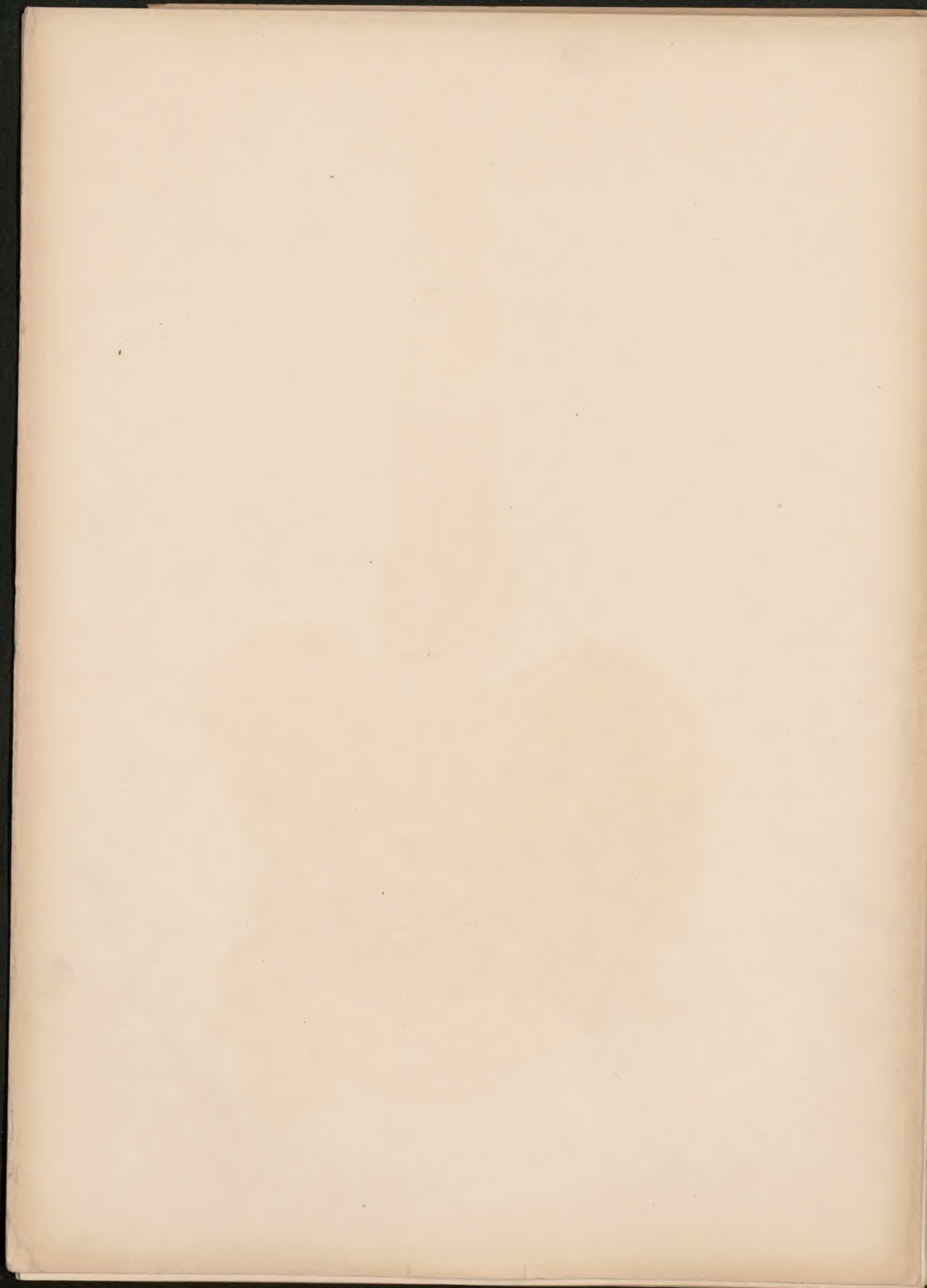


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CATARRHUS VENTRICULI CHRONICUS.  
PHLEBECTASIAE PARTIS INFERIORIS OESOPHAGI.

Gezeichnet von W. GUMMELT.

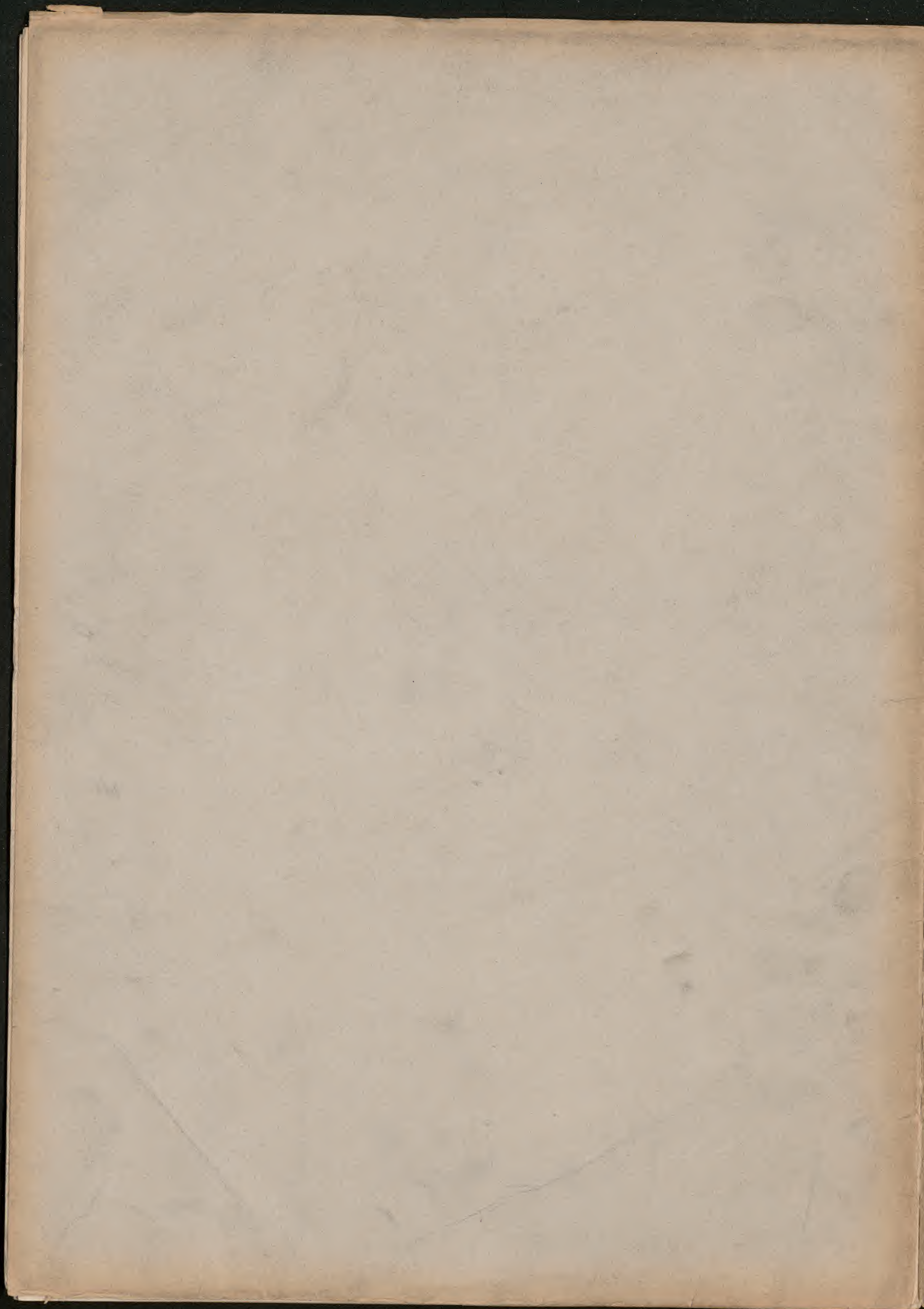














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by

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Pathologist and Lecturer on Pathology at the Middlesex Hospital.

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## PREFACE TO SECOND SERIES.

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IN the few introductory words which we published with the first part of the Illustrations of Practical Pathology five years ago, we considered it necessary to emphasize the fact that the authors were fully conscious of the difficulties attending the continuation of the task before them.

Originally we attributed this to the apparently obvious fact that an illustrated book of purely theoretical and scientific contents would from the first be limited to a narrow circle of readers and would eventually have chiefly to count upon the support of academic institutions and the larger hospitals. Subsequent events have taught us the incorrectness of this view. The majority of our subscribers are practitioners, and it is from among medical men in practice that suggestions have reached us with regard to an entirely new arrangement of the contents of this publication and it is upon these lines that we trust to complete the work at an early date.

Thanks to the artistic manner in which our artist, Herr Gummelt (who did most of the drawings for our Atlas), has executed the originals, and whose name we particularly desire to state was only omitted from the title-page at his own express wish for special reasons; thanks also to the devoted care of the Kunstanstalt Seitz, in Wandsbek, the technical execution of the plates has given universal satisfaction. On the other hand, the choice of subjects has met here and there with criticisms, which we cannot deny were justified.

As so often happens, our task has grown under our own hands. The original object of making pathological specimens of great interest, taken from the superabundant material of the Hamburg hospitals, available to wider circles, has shown itself to be too narrow, and we have had from practitioners the expression of an urgent want of a pictorial survey of the whole field of morbid anatomy depicted in a series of typical specimens.

Through the friendly aid of Prof. Von Kahlen, in Freiburg, we have decided on a plan which, in our opinion, renders it possible to fulfil our task in the limited space of eighteen further parts—at least, so far that no great gaps will be left in the Atlas. We have submitted our plan to the approbation of Prof. Virchow and Prof. Ziegler, and venture to append their valuable opinion on it and on the scientific and practical value of the parts of the Gummelt-Seitz Atlas which have already appeared.

The idea of the realization of this ever-widening plan would have had to be given up at once, had not some Hamburg institutions for the furtherance of German science and art supported us in a most magnanimous manner. To Herr Bürgermeister Versmann and Herr Senator Kähler (as Presidents of the Auerhoff Bequest), and to Dr. Kellinghusen (President of the Kellinghusen Fund) we are much indebted for considerable grants out of the funds of the above-named bequests.

On the interest which is shown in wider medical circles in the Pathological Atlas in this revised form will depend the completion of a work which, according to universal opinion, cannot fail to redound to the credit of German reproductive art.

A. KAST.

TH. RUMPEL.

Breslau, Hamburg-Eppendorf,  
*June, 1896.*

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The pathological-anatomical plates drawn from fresh preparations published by Dr. Th. Rumpel, in conjunction with Prof. A. Kast, present a series of very characteristic cases in which marked alterations of single organs were found. Although the majority of cases could only be chosen from among the more common diseases, yet of the rarer and exceptional cases those have been selected which presented important and striking changes of diagnostic significance. The execution of the plates has been done throughout with great skill and artistic taste, not only by the artists who made the originals, but also by the publishers, who have placed their subsequent reproduction in reliable hands.

Judging from the first part, the work, the completion of which may be expected at an early date, will prove a very valuable contribution to medical literature, especially useful to those engaged in forensic medicine, and will also be a very useful addition to the libraries of smaller medical societies and practitioners in rural districts.

This work may consequently be especially recommended to the attention of general practitioners, as well as those engaged in hospital practice.

RUDOLPH VIRCHOW,

Director of the Pathological Institute, Professor Publicus Ordinarius at the University.

Pathological Institute of Berlin University,  
*February 13, 1896.*

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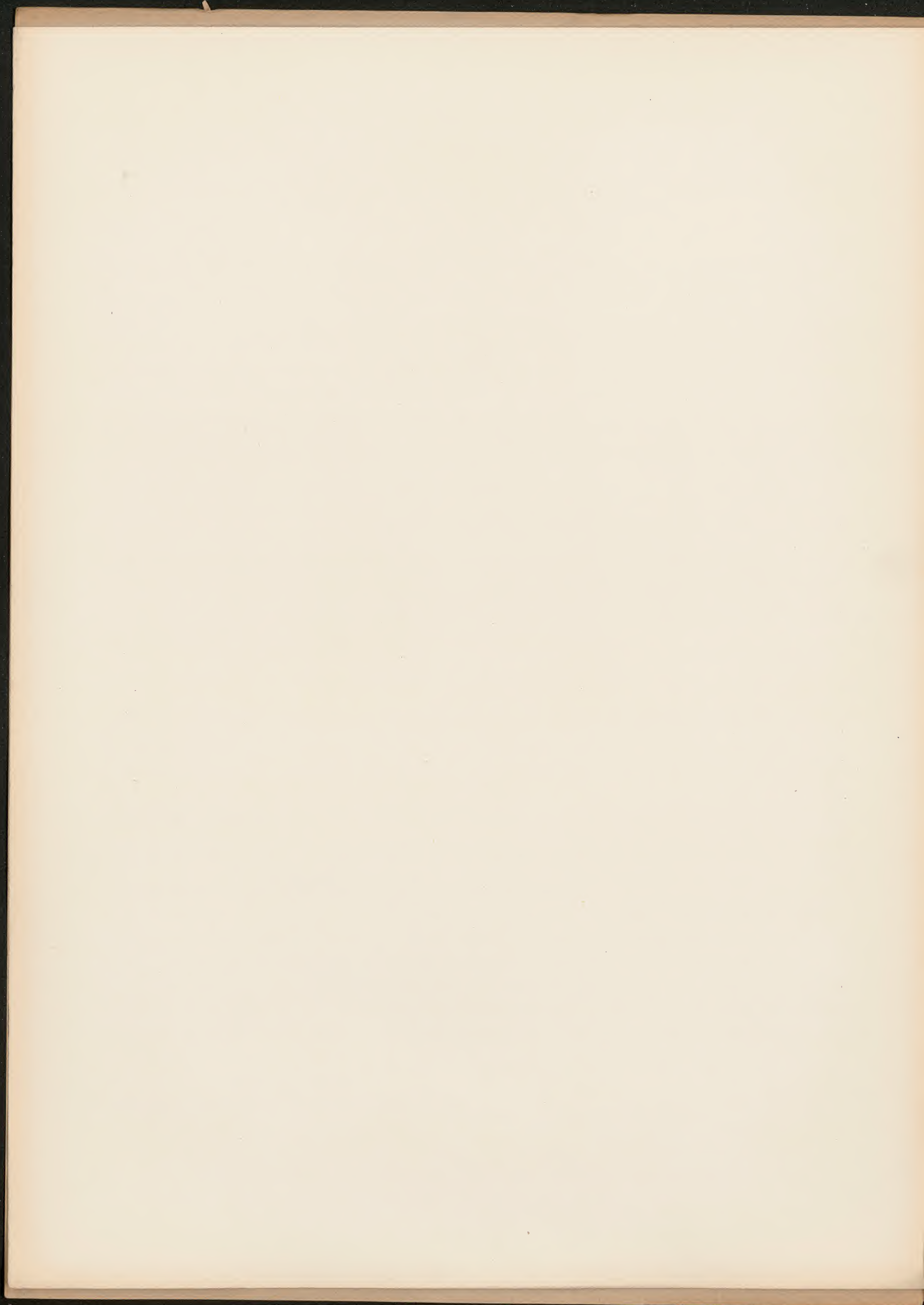
The pathological-anatomical plates which have as yet appeared show thoroughly successful reproductions of the specimens depicted. Chromo-lithography lends itself very well to the representation of the shades of colour met with in diseased tissues and organs, which are so hard to reproduce, and the present plates are much better and more beautiful than those in Cruveilhier and Lebert's Atlas. I constantly use the plates in my lectures, and I find them an excellent substitute for fresh preparations, which are not always available for demonstration. I should hail with joy the expansion of the plates, which have already appeared, into an Atlas in which were reproduced the most important changes in the organs, characterized chiefly by definite alterations in the colour of the parenchyma. I am convinced that such an Atlas would find a wide circulation in pathological institutes and in clinics, and also be welcome to the practitioner. I repeat that I consider the reproductions of pathological-anatomical drawings which have as yet appeared to be the best of all similar works hitherto published.

DR. ERNST ZIEGLER,

Prof. of Pathological Anatomy and General Pathology in Freiburg.

Freiburg,  
*January 22, 1896.*







## PART XIII.

# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

### Index of Sections.

C.—Circulatory Organs. K.—Bones, Muscles, and Tendons. N.—Nervous System. H.—Skin. F.—Alimentary Canal and Peritoneum. D.—Liver, Pancreas, Spleen, and Lymphatic Glands. R.—Respiratory Organs. U.—Urinary Organs. G.—Reproductive Organs. S.—Organs of Special Sense.

### R., PLATE III.

#### Bronchiectasis of the Lower Lobe with recent Tubercular Infiltration of the Upper Lobes.

A labourer's wife, aged 33, admitted in January, 1889, to the Neue Allgemeine Krankenhaus on account of a cough with abundant expectoration. The patient, who had no hereditary taint, said that she had suffered for the last ten years with cough accompanied by abundant, at times offensive, expectoration, which was regularly worse each winter. Except for slight shortness of breath on exertion, she noticed nothing abnormal, no feverishness, no night-sweats and no distinct loss of flesh. The woman is married, has had two healthy children, and has been able to do her work about the house quite well.

Present state, January 20, 1889 : A slender, fairly strong woman. No pyrexia. Skin and mucous membranes rather pale. Glands not swollen. Thorax well formed. Lungs moderately emphysematous. Resonance extends to the eighth rib in front on the right side, and to the fourth intercostal space on the left side ; behind, down to the insertion of the twelfth rib. Resonance good over both lungs.

On auscultation, weak vesicular breathing, with occasional dry expiratory rhonchi over the whole right lung and the upper lobe of the left lung. At the left posterior base very abundant medium and large moist and partly consonating râles, which mask the breath-sounds entirely. Heart and abdominal viscera natural. Expectoration very abundant, muco-purulent, nummulated, very offensive. On repeated examinations, no tubercle bacilli were found. The diagnosis of emphysema, with putrid bronchitis, chiefly localized to the left lower lobe, was made, and the patient treated with turpentine inhalations and the internal administration of turpentine in 0.5 gramme (10 minim) capsules three times a day. Under this treatment the catarrhal signs and the quantity of expectoration gradually disappeared, and well-marked bronchial inspiration with loud amphoric expiration was heard over the left lower lobe.

On leaving the hospital, on March 23, 1889, the following note was made : ' The patient has gained 8 lb. The expectoration has disappeared, except for three or four masses coughed up on rising in the morning. No dulness over the lungs. Constant loud bronchial breathing over the left posterior base. No râles. Fremitus better marked at the left than the right posterior base.'

The diagnosis was now made of bronchiectasis in the left lower lobe, and moderate emphysema of the rest of the lungs.

Two and a half years later the patient was again admitted in a very grave condition. She reported that she had been quite well for the first three months after leaving the hospital, but then, in the winter of 1889-1890, the cough and expectoration became worse again, but soon improved under treatment with turpentine by a private doctor.

During the next year she remained in much the same condition. In the early part of 1892 she had a bad confinement, and had never been well since. The cough had got worse, and was no longer amenable to the former treatment. In April and June of this year the expectoration had been for some time blood-stained, and on August 10 she had had a sharp attack of hæmoptysis, since which she had been confined to her bed, and had continuous pyrexia and profuse night-sweats.

Present state, December 12, 1892 : A hectic-looking woman, wasted to a skeleton. Temperature, 102.5° F. Pulse, 120. Respirations, 36. Mucous membranes, especially of the palate and pharynx, extremely pale ; slight glandular swellings in the neck and groins. Chest long and narrow. Supra- and infra-clavicular fossæ very deep. Dulness over both apices, on the right distinctly tympanitic note ; over the left front the dulness is more marked, and passes into the cardiac dulness. At the upper part of the left lung behind, the percussion note is deficient, as low as two finger-breadths beneath the spine of the scapula, and then becomes clear and strikingly tympanitic down to the base. On the right side posteriorly the note is dull as low as the spine of the scapula, but resonant below this. On auscultation over the left



upper lobe, both behind and in front, weak bronchial breathing and numerous small and medium-sized moist râles are heard. Over the left lower lobe there is loud bronchial inspiration, with amphoric expiration, and large splashing râles are heard, with both inspiration and expiration all over the lobe. Over the right apex there is loud bronchial breathing, with numerous medium-sized and small metallic râles. Over the right front, below the third rib, and posteriorly below the spine of the scapula, there is sharp vesicular inspiration, with scattered sibilant rhonchi.

The expectoration, which is brought up painlessly, is very copious, muco-purulent, and very offensive, and under the microscope shows fattily-degenerated pus cells, fat crystals, and a few elastic fibres. Bacteriological examination shows numerous tubercle bacilli. The other viscera are not appreciably affected. Complete anorexia. The patient passes five to seven loose stools a day, in which tubercle bacilli were also found.

The diagnosis was made of advanced pulmonary and intestinal tuberculosis and old bronchiectasis of the left lower lobe. For a few days the patient was treated with turpentine, and then with myrtol (7 minims every two hours in capsules), but these had to be given up, on account of the continual vomiting, and opium suppositories and subcutaneous injections of morphia were substituted. The hectic fever continued high, with very profuse night-sweats, and death took place fourteen days after admission into the hospital.

Autopsy. Body markedly emaciated. On opening the thorax the lungs retract only slightly. Both upper lobes and the left lower lobe are fixed by firm pleural adhesions. Left lung: The upper lobe is riddled with closely-set caseous broncho-pneumonic patches which extend right up to the apex and show up sharply, by their different grayish-yellow colour, from one another and from the slate-coloured connective-tissue tracts which separate the individual patches. About the middle of the upper lobe there is an oblong cavity, with nodular walls, filled with caseous material; lower down there is a second cavity the size of a hazel-nut, into which a completely-caseated, but still adherent, portion of lung projects. On washing the surface with a stream of water, three or four other cavities, each about the size of a pea, are seen. The lower lobe shows a series of smooth-walled saccular cavities, varying in size from a bean to a hen's egg, which communicate with one another and with the bronchial ramifications. After washing away the offensive, abundant pus, the inner surface is seen to have a lining resembling a mucous membrane, and presenting in parts a red, in parts a slate-gray colour and patches of radiating scar tissue. The cavities everywhere extend right up to the surface of the lung, and there is no normal air-containing lung tissue to be seen anywhere. In the upper third of the lobe the remaining lung tissue shows slaty induration and is airless. The pleura at the base of the lung shows scar-like thickenings.

The right lung shows at its apex a large, and lower down several small, cavities and caseating broncho-pneumonic patches, between which the lung still contains air. In the middle and lower lobes there are scattered patches of peribronchitis. The rest of the autopsy did not present any important alterations in other organs, with the exception of an extensive tuberculosis of the intestine and fatty degeneration of the liver.

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## R., PLATE IV.

### Chronic Pulmonary Tuberculosis with commencing formation of Cavities.

This specimen was obtained from a waiter, aged 36, suffering from well-marked pulmonary tuberculosis since the spring of 1891, when he was admitted to the hospital after an attack of hæmoptysis and found to have disease of the apices of both lungs. He was treated with tuberculin with good results. He left the hospital in July, much improved. In the winter of 1891-1892 he got worse. The patient took no care of himself, but continued at work for the next two years under most unfavourable conditions, in spite of continuous cough and expectoration. For three months before admission he had pyrexia, night-sweats and progressive wasting. He died four weeks after admission on September 4, 1894.

The clinical notes about the right lung are as follows: Complete dulness over the back and front of the whole upper lobe. In front there is bronchial breathing as low as the third rib, accompanied by a few medium and small bubbling râles. Harsh breathing, with discrete small bubbling râles and dry rhonchi was heard from the third rib down to the lower border of the lung. Behind there is weak bronchial breathing as low as two finger-breadths below the scapula and a few catarrhal sounds. Lower down there are abundant moist râles masking the breath-sounds.

The specimen shows the right upper lobe and a part of the middle lobe (below). The section is carried from the apex in the axillary line to the root of the lung, and somewhat in front of it; the upper halves are turned back and show both cut surfaces, but only the anterior part of the cut surface of the middle lobe is seen.

The upper lobe consists for the greater part of a very firm, uniformly indurated, slate-gray tissue, containing very little air and in which a few scattered grayish-white nodules are visible. The inter-alveolar septa stand out clearly, as thickened whitish strands, from the dark pigmented lung tissue; here and there whitish tracts of connective tissue are seen spreading from the thickened pleura into the lung tissue. The bronchi show a general uniform dilatation and are visible, even at some distance from the hilum, as tubes the diameter of a goose-quill. At the apex of the upper lobe there is a portion of lung, nearly the size of a hen's egg, which has undergone complete caseation and in which a mapping out of lobules can still be recognised. This portion of lung is continuous at its under part with the indurated lung tissue into which it imperceptibly passes. The rest of this caseous mass has separated entirely at its edges from the pleura and the neighbouring lung tissue and lies free like a sequestrum in a rather firm capsule, from which it can be slightly raised with forceps.

The middle lobe, which is firmly united to the upper lobe, shows numerous arborescent peribronchial deposits of whitish nodules in the otherwise normal lung tissue.

The bronchial glands at the root of the lung are swollen and show slaty induration.



## R., PLATE V.

### Gangrene of the Lung.

The Plate shows the Left Upper Lobe of the Lung (to the left) and the Right Lower Lobe with several Gangrenous Patches.

The organs were obtained from an artisan, aged 42, who died from an ulcerating carcinoma of the upper third of the œsophagus, which had perforated into the trachea.

Three days before death the patient had a rigor and high temperature and brought up extremely offensive, dirty-gray, blood-stained pus; the breath had a penetrating fœtor. Physical examination of the lung showed only some scattered dry rhonchi.

In the left upper lobe there are several nodular, mostly spherical, fluctuating foci, which form projections on the pleural surface. They are filled with offensive contents and are marked off from the surrounding lung tissue by a red line of demarcation one-twelfth of an inch wide. The inner wall of the cavities shows tag-like projections, which float out in water. The pleura over these patches is dull, dirty-white, very thin and friable.

In the right lower lobe there is a gangrenous patch reaching, in its widest part, right up to the base of the lung and filled with offensive shreds, and presenting similar characters to those previously noted. The lung tissue in the immediate neighbourhood is discoloured, of a greyish-green colour, and shows a bulging surface from which turbid, purulent, offensive fluid exudes on pressure. There are several smaller gangrenous foci in the neighbourhood of the larger one. The mucous membrane of the bronchi leading to the patch is of a dirty red colour. The branches of the pulmonary artery are free from abnormal contents.

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## R., PLATE VI.

### Primary Carcinoma of the Lung perforating into the Bronchus.

The specimen was obtained from a workman, aged 50, who was admitted to the hospital on October 25 in a very bad state. He said that he had suffered for the last four months with a cough, accompanied by partly blood-stained expectoration, shortness of breath and increasing weakness. During the recent cholera epidemic he had got markedly worse.

The following condition was made out: Much wasted, cachectic. The glands in the neck, especially in the right supra-clavicular fossa, are enlarged. Temperature, 103° F. Pulse, 130. Respirations, 40. Over the whole of the right lung in front and behind there is absolute dulness, loud bronchial breathing and occasional moist râles. Over the right lower lobe there is very weak, distant bronchial breathing, but no râles; vocal fremitus distinctly diminished. Over the left lung there is nothing especial to note, except some diffuse dry rhonchi. The other viscera are not appreciably affected.

After an exploratory puncture in the ninth right intercostal space behind had shown blood-stained fœtid contents, an attempt was made to remove the exudation with a larger trochar, but only a few drops of very offensive thick pus were obtained. On the next day, as the patient's condition appeared extremely grave on account of the excessive dyspnœa, a portion of the ninth rib on the right side was resected. The layers of the pleura appeared entirely united, but on carefully separating them with the finger, a softened gangrenous patch the size of an apple was found in the lung and was plugged with iodoform gauze. As the patient became collapsed, the operation was not completed, and the patient died three hours later.

Autopsy. Right lung universally adherent. In the lower lobe, about three finger-breadths above the lower border, is a round cavity the size of a pigeon's egg stuffed with iodoform gauze. On section the whole of the right lung is seen to be airless and in a state of grey hepatization. In the uniformly grey tissue of the upper and middle lobes, which show a markedly granular surface, are seen five or six button-like, firm, white nodules, varying in size from that of a bean to a pea and having a smooth surface on section.

In the lower and posterior part of the lower lobe, close to the diaphragmatic pleura, is a whitish tumour the size of a hen's egg consisting of several medullary nodules. It is separated from the surrounding lung tissue by a fibrous capsule from which firm strands pass into the mass of the growth. The growth has extended upwards in the form of two elongated rounded masses and has invaded the wall of a large bronchus and has grown through it and then upwards into the lumen of the main bronchus, which it entirely occludes like a thrombus. The projecting piece of growth inside the main bronchus sends a larger branch into the bronchus of the middle lobe and reaches almost down to the bifurcation, where it ends in a blunt extremity. The rest of the lower lobe, which is completely hepatized, shows several whitish, rather firm, stud-like metastatic tumours, the largest the size of a threepenny-piece.

The left lung is much inflated, aerated, and riddled in both upper and lower lobes with small, pale-red nodules.

The rest of the autopsy shows nothing worth noting, with the exception of metastatic deposits in the cervical glands and retro-peritoneal tissue.

Microscopical examination shows the growth to be a cylindrical epithelioma with an adenomatous structure. The growth has in all probability originated in the smallest bronchi. The drawing represents the posterior aspect of the right lung. The lower lobe is divided in the axillary line; the posterior half of it has been drawn upwards and outwards so as to bring to view the cut surface of the anterior half. In this section the tumour above described is seen near the inner margin, and shows very well how it has grown into the bronchus.



## R., PLATE VII.

### Metastatic Deposits of Carcinoma in the Pleura.

The specimen was obtained from a woman who died from carcinoma of the stomach.

On the pleura of the right upper lobe are several whitish nodules the size of a shilling raised about one-fifth of an inch above the surface; they are sharply marked off from the deeply pigmented lung. The growths show marked injection of the vessels in their periphery; the centre is retracted. The growths are situated in the pleura and send finger-like processes into the otherwise unaltered lung.

Microscopical examination shows them to be cylindrical epitheliomata.

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## R., PLATE VIII.

### Carcinoma of the Costal Pleura.

The specimen was obtained from a woman, aged 40, who died from a recurrent carcinoma of the breast.

On the costal pleura there are very numerous roundish nodules, varying in size from a pin's head to a lentil; some of them show evident vascularization. The nodules are arranged partly in close set groups, partly discretely, and leave it doubtful from their arrangement whether their dissemination followed a definite system, *e.g.* the lymphatics, or not.

Microscopical examination showed the tumour to be a simple carcinoma.



R 3.—



BRONCHIECTASIS LOBI INF. PNEUMONIA CASEOSA LOBI SUP.

R 4.—



TUBERCULOSIS PULMONUM. VOMICA INCIPIENS.

Gezeichnet von W. GUMMELT.  
VERLAG UND CHRONOGRAPHIE DER KUNSTANSTALT (VORM. CUSTAV W. SEITZ) A.-G. WANDSBEEK









GANGRÆNA PULMONUM MULTIPLEX.

Gezeichnet von W. GUMMELT.









Gezeichnet von W. GUMMELT.







R 7.—



METASTASES CARCINOMATOSAE PLEURAE.

R 8.—



CARCINOMATOSIS PLEURAE COSTALIS.

Gezeichnet von W. GUMMELT.







# Contents of the Complete Work.

The right of addition and alteration is reserved. Those plates marked \* have already appeared.

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# ILLUSTRATIONS OF PATHOLOGICAL ANATOMY

Being a series of chromographed plates painted from nature immediately after death  
from material in the Hamburg Hospitals

with descriptive Anatomical and Clinical text by

PROF. D<sup>R</sup>. ALFRED KAST,  
Professor of Clinical Medicine, (Breslau) formerly Director of the Hamburg Town Hospitals

and

D<sup>R</sup>. THEODOR RUMPEL,  
Senior Physician at the New General Hospital, (Hamburg).

English Edition

revised and edited

by

ARTHUR FRANCIS VOELCKER M. D. LOND. M. R. C. P.  
Pathologist and Lecturer on Pathology at the Middlesex Hospital.

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(Second Series)

ARTHUR FRANCIS VOELCKER M. D. LOND. M. R. C. P.

Pathologist and Lecturer on Pathology at the Middlesex Hospital.

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# PART XIV.

## ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

### Index of Sections.

C.—Circulatory Organs. K.—Bones, Muscles, and Tendons. N.—Nervous System. H.—Skin. F.—Alimentary Canal and Peritoneum. D.—Liver, Pancreas, Spleen, and Lymphatic Glands. R.—Respiratory Organs. U.—Urinary Organs. G.—Reproductive Organs. S.—Organs of Special Sense.

### R., PLATES IX., X., AND XI.

#### Tuberculosis of the Larynx.

The specimen was taken from a countryman, aged 19, who had previously enjoyed good health and had no hereditary disease. For the last year and a half he had been troubled with a cough and expectoration, had gradually wasted, and for the last half-year had been unable to do his work. Four weeks before admission he became hoarse, was very feverish, and had been confined to his bed.

On admission it was found that he had advanced tubercular disease of both lungs and was markedly emaciated.

Laryngoscopical examination showed extreme pallor of the mucous membrane of the palate and tonsils, injection of the upper orifice of the larynx, marked swelling of the parts around the arytenoid cartilages, with a jagged excrescence, which appeared partly covered with pus, between them. The left false cord was swollen and almost entirely concealed the true vocal cord, which moved very imperfectly and showed distinct serration of its posterior portion. The right vocal cord was injected, but showed no ulceration.

Death took place two weeks after admission to the hospital.

The autopsy showed in addition to advanced pulmonary and intestinal tuberculosis the following condition in the larynx: The arytenoid cartilages, especially the left one, were œdematous. On the inner side of the left cartilage was a deep ulcer which extended down to the cartilage and reached forward along the left vocal cord, destroying quite two-thirds of it. At the anterior extremity of the ulcer were two grayish-white nodules the size of a pin's head.

The right vocal cord showed nothing abnormal beyond a whitish thickening of the mucous membrane about its middle.

### R., PLATE X.

From a journeyman baker, aged 26 years, whose father died from consumption. Two years ago the patient had influenza followed by cough and expectoration. He had been hoarse for the last two months, but for the last few days had suffered from such acute pain on swallowing that it was almost impossible for him to take any food, and on this account he came to the hospital.

On admission he was markedly emaciated and pale. Temperature  $103.2^{\circ}$ . Pulse 120; small. There was dulness over the upper lobe of the right lung with bronchial breathing and numerous râles, some distinctly metallic in character. Over the apex of the left lung there were a few scattered catarrhal sounds. The rest of the lung appeared natural.

The voice was quite hoarse and the patient complained of very severe pain on swallowing. Laryngoscopical examination showed the mucous membrane of the pharynx to be much injected and covered with viscid glairy mucus. The epiglottis was thickened, rigid and reddened. The ary-epiglottic folds were ulcerated. The mucous membrane of the interior of the larynx was markedly reddened and swollen, especially in the neighbourhood of the false cords. The true vocal cords were infiltrated and distinctly jagged, and there was an ulcer with raised edges in the interarytenoid fold. There were very many tubercle bacilli in the sputum.

The difficulty in swallowing increased, and the patient, who emaciated rapidly, died in three weeks.

The autopsy revealed tubercular infiltration and excavation of the upper lobe of the right lung, caseous infiltration of the apex of the left lung and scattered patches of recent peribronchitis were found in the other parts of both lungs. The larynx showed the following condition: Almost the entire entrance to the larynx was surrounded by a sinuous ulcer, reaching along the ary-epiglottic folds to the epiglottis, which was thickened and infiltrated, though not ulcerated. The ulcer extended on to the mucous membrane of the processus pyramidalis, more especially on the right side, and also to the mucous membrane of the pharynx covering the cricoid cartilage. Within the larynx (not shown in the plate) it extended over the anterior surface of the arytenoid cartilages up to the vocal cords, which were also almost entirely destroyed by ulceration.

### R., PLATE XI.

The specimen was taken from a labourer, aged 22 years, who was admitted, in extremis, with advanced consumption. He had been quite hoarse for the last three months.

No laryngoscopical examination could be made on account of the patient's condition.

At the autopsy there was found advanced ulcerative tubercular disease of the lungs and intestine.

The throat showed the following condition: A large crateriform tubercular ulcer, commencing at the root of the tongue, extended over the epiglottis to the interior of the larynx as low as the rima glottidis. The epiglottis was contracted by the ulceration to half its size, and projected in sharp irregular serrations from the upper part of the floor of the ulcer, in the middle of which the necrosed thyroid cartilage was exposed. Both false and true cords were entirely destroyed. The lower border of the ulcerated surface was formed by a jagged mass projecting into the interior of the larynx. Below this the mucous membrane of the larynx was seen and was quite free from any tubercular foci and appeared normal. The mucous membrane over the arytenoid cartilages was markedly œdematous.



## F., PLATE XXII. Sloughing Cellulitis of the Neck (Angina Ludovici).

The specimen was obtained from a girl, aged 13, who had enjoyed good health up till fourteen days ago, when she complained of pain in the throat, difficulty in swallowing, and feverishness. These symptoms increased, and for the last few days she had had an offensive discharge of blood and pus from the mouth.

Her state on admission was as follows: She was a very well-built and well nourished girl, with a temperature  $103.5^{\circ}$ , and pulse 130. There was an extremely-marked fœtor about the mouth. The gums were slightly swollen and the tongue furred. In the position of the right tonsil was an abscess cavity secreting blood and pus, about two-fifths of an inch deep, and surrounded by necrotic tissue. The soft palate, left tonsil and nasal cavities were quite intact. The skin over the right lower jaw showed a hard, rather painful, reddened infiltration. The other viscera, including the heart, showed no appreciable change.

The abscess cavity was carefully freed from the loosely adherent necrotic tissue by means of blunt instruments and washed out with boracic lotion. Aristol was subsequently dusted over the part. Chlorate of potash gargles were ordered and an ice-bag was placed over the upper part of the right side of the neck. On the following days the gangrenous process in the pharynx rapidly spread, both in depth and extent, upwards, involving the soft palate, and forwards, involving the edge of the tongue. The tissue in the neighbourhood showed a dirty-green coloration, without any evidence of inflammatory reaction. The external swelling became more marked and the skin behind the angle of the right lower jaw showed a bluish-black discoloration. Well-marked fluctuation being obtained at this spot, an incision was made, under an anæsthetic, and a counter-opening was made in the throat. Only a little turbid œdema fluid, but no pus, escaped. The wound was drained, but in spite of this the temperature continued high and the symptoms were not relieved. On the next day stridor and dyspnœa developed. The low operation of tracheotomy was performed. The general condition of the patient became very grave and she died five days after admission—after an illness of nineteen days.

The autopsy showed the following condition: The right side of the pharynx was entirely destroyed by a deep necrosis of the soft parts, which extended from the right half of the base of the tongue to the right sinus pyriformis and thence upwards on the soft palate nearly as far as the middle line. No trace of the right tonsil and pillars of the fauces could be found; in their place was a cavity filled with blackish masses, extending outwards to the skin. In the periphery of this area the mucous membrane showed green discoloration and was œdematous, especially on the right side of the epiglottis and arytenoid cartilage. A similar condition existed over the right ary-epiglottic fold, extending over part of the right side of the interior of the larynx as low as the vocal cord. There was no trace of any line of demarcation to be recognised anywhere. An incision through the affected part showed that the necrosis extended into the deeper parts as well, without any clear line of demarcation. These tissues yielded a discoloured œdema fluid, but no trace of pus. Cover-glass preparations of the œdema fluid and of the gangrenous sloughs showed numerous streptococci. A pure culture was obtained of those from the œdema fluid. The rest of the examination showed nothing unusual, except some fatty degeneration of the heart and cloudy swelling of the kidneys.

## F., PLATE XXIII. Scarlatinal Angina.

The specimen was obtained from a girl, aged 5 years, who had previously enjoyed good health. She had felt rather unwell for two days, had vomited, and complained of pain in her throat and head. On admission, on the third day of illness, a typical scarlet fever rash developed, the child became very ill, semi-comatose, and had a high temperature.

The throat symptoms were marked from the first, the soft palate and uvula being markedly injected and swollen.

The tonsils were very swollen, of a dark bluish-red colour and covered with confluent purulent plugs. The glands beneath the lower jaw were much swollen. Subsequently the general condition became worse, and with this the tonsils showed a brown discoloration. There was marked fœtor about the mouth, but no trace of any exudation. The skin about the lower jaw was infiltrated but there was no fluctuation.

Death took place on the eighth day of the attack, six days after the appearance of the rash.

At the autopsy the mucous membrane over both tonsils was found completely necrosed. At the lower border of the right tonsil the gangrenous mucous membrane was beginning to separate, while over the rest of both tonsils it was still firmly adherent. The margins of the neighbouring parts were injected and œdematous. The mucous membrane of the epiglottis and upper aperture of the larynx was much swollen, but there was no trace of any false membrane on it. Streptococci were cultivated from the turbid fluid squeezed from the substance of the tonsils. The other organs presented nothing of interest.

## R., PLATE XII. Diphtheria of the Pharynx, Larynx, and Air-passages.

The specimen was obtained from a strongly-built girl of 9 years, who had been ailing for two days with sore throat, feverishness, and general malaise. Two other children in the family fell ill at the same time, and one of them, a boy aged 4, died on the morning of the day of her admission.

On admission the child was very ill, had a high temperature and a pulse of 140, small. The glands and subcutaneous tissues of the neck were swollen and doughy. There was an offensive purulent discharge from the nose; the anterior nares were almost blocked by swelling. The tongue was dry and thickly coated. The mucous membrane of the soft palate and here and there of the hard palate and the whole of the pharynx was covered with a thick greenish-yellow (in parts almost black) exudation. Hoarseness and slight stridor were present. The other organs, including the heart and lungs, were normal. During the night the stridor increased, there was marked retraction, dyspnœa and restlessness. The high operation of tracheotomy was performed and thick whitish coherent membrane was expelled through the tracheotomy wound, with relief to the patient. On the next day the dyspnœa returned; the pulse was almost imperceptible; the child became unconscious and died on the evening of the fourth day of her illness.

The specimen consists of the pharynx, larynx, and air-tubes, which were taken out in one piece with the lungs and are shown in the plate as seen from behind. The larynx, trachea, and larger bronchi have been opened along their middle line posteriorly. Between the much swollen tonsils and uvula the buccal cavity is seen in the upper part.



The mucous membrane of the pharynx was converted into a blackish necrotic mass in which a distinct false membrane could no longer be recognised. The nasal cavity was completely lined with membranous exudation. The mucous membrane of the epiglottis and ary-epiglottic folds were markedly œdematous. The interior of the larynx was covered with a rather tough grayish-white exudation, which spread in a continuous sheet down into the trachea and larger bronchi. The false membrane in this situation could be comparatively easily separated, leaving behind it the markedly injected, raw mucous membrane of the air-passages. The lung showed a few dark purple atelectatic patches depressed below the surface. A section through the lungs showed false membrane in some of the smaller bronchi, some of which were quite plugged by it, and in addition some scattered patches of broncho-pneumonia. Cover-glass preparations of the false membrane showed various forms of bacteria, the diphtheria bacilli being by far the most numerous. Experimental cultivations confirmed the presence of the diphtheria bacillus.

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### R., PLATE XIII. Chronic Œdema of the Larynx.

The specimen was obtained from a man, 50 years of age, who had suffered from renal disease for two years and had been treated as an out-patient for the last five months for hoarseness and dyspnœa.

Laryngoscopical examination showed a uniform, rather tense swelling of the epiglottis, of the ary-epiglottic folds and the arytenoid cartilages. The view into the interior of the larynx was much obscured by the swelling, and on phonation only the right cord could be seen; it was slightly injected and freely movable beyond the middle line. The appearances in the larynx continued unaltered till the patient's death from the renal trouble a few weeks later.

At the autopsy there was found tense œdema of the whole of the mucous membrane of the larynx, especially marked at its upper aperture. The swelling extended to the mucous membrane of the sinus pyriformis and of the pharynx over the cricoid cartilage. On laying open the larynx in the middle line, a shallow ulcer having jagged edges was found on the inner surface of the left side, destroying the true and false cords entirely. In the periphery of the ulcer were some grayish-white, obviously tubercular, nodules.

The rest of the autopsy showed calcified tubercular deposits at the apices of both lungs and an advanced stage of contracting granular kidney.

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### R., PLATE XIV. Papilloma of the Larynx (Pachydermia Laryngis Verrucosa of Virchow).

The specimen was met with incidentally in the course of an autopsy on a woman, aged 58, who died with tubercular meningitis. She was said to have suffered with hoarseness since childhood.

The specimen shows the true and false cords to be almost entirely covered with delicate warty growths, some of which are clearly pedunculated. At the anterior extremity of the left, and at the posterior extremity of the right vocal cord, is a larger branched dendriform growth. The mucous membrane of the rest of the larynx is otherwise of normal colour and appearance.

Microscopical examination showed the chief mass of the growth to consist of proliferated squamous epithelium, forming a thick covering over an extremely delicate vascular fibrous stroma.

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### R., PLATES XV. AND XVI. Carcinoma of the Larynx.

The specimen was obtained from a labourer, aged 66, who had enjoyed good health up till six months ago, when he began to suffer from hoarseness, cough and progressive emaciation. During the last two months severe attacks of dyspnœa had developed.

Tracheotomy had to be performed on account of an attack of dyspnœa accompanied by marked stridor and retraction. At first the patient's condition was much improved by the operation. The laryngoscopical examination, which had previously been impossible, showed that the epiglottis hung loosely over the upper aperture of the larynx and completely obstructed the view. In the neighbourhood of the arytenoid cartilage there seemed to be a nodular tumour. This could be felt with the examining finger as a firm tumour lying behind and partly on the larynx. A bougie passed readily into the œsophagus, there was no difficulty in swallowing and the glands in the neck were not enlarged. The other organs appeared natural, with the exception of some emphysema of the lungs and some fibrosis of the arteries. The patient had continuous, abundant, purulent expectoration, at times mixed with blood, and rapidly lost ground. Death took place eight months after the onset of the first symptoms and one month after the tracheotomy performed on his admission to the hospital.

The plate (R. XVI.) represents the unopened larynx. The mucous membrane over the cricoid cartilage is seen presenting a tumour-like thickening and the neighbourhood of the arytenoid cartilage is converted into a tumour-like mass, which fills up the whole right sinus pyriformis. The whole larynx is twisted on its long axis by the growth through nearly forty-five degrees to the left, so that its posterior median point is quite on the left side. The tumour-like growth projects so much over the arytenoid cartilage and the right ary-epiglottic fold into the interior of the larynx that the latter is almost entirely covered and the rima glottidis is transformed into a small triangular opening having its base posteriorly. The epiglottis, which is not invaded by the growth, is unusually limp, and when the larynx is held vertically, falls down over and completely covers the entrance to the larynx.

The other plate (R. XV.) represents the larynx opened in the middle line behind. It shows that the tumour which was visible from the outside has completely grown round the body of the cricoid, and has pushed its way beneath the mucous membrane of the otherwise intact surface of the true and false vocal cords of the right side into the interior of the larynx, and has filled up the greater part of the right sinus of Morgagni, forming there a mass of cylindrical projections. The cricoid itself, at its anterior portion, is broken through about its middle, and masses of growth have spread at this spot into the cancellous tissue of the bony plate of the cricoid.

On section the growth has a bacon-like character and shows in the otherwise uniformly whitish colour some yellowish, firmer, evidently degenerating portions. The neighbourhood of the left vocal cord is natural. In the upper part of the trachea is seen the triangular tracheotomy wound, five-eighths of an inch long, dividing the cricoid cartilage and the first and second rings of the trachea. There were no metastatic deposits, except some carcinomatous infiltration and a slight swelling of the deep cervical glands.

The rest of the autopsy showed pulmonary emphysema and advanced fibroid disease of the arteries.

Microscopical examination of the tumour showed it to be a squamous-celled carcinoma.



## R., PLATES XVII. AND XVIII. Ulceration of the Larynx in Typhoid Fever.

The specimen shown in Plate XVII. was taken from a girl, aged 18, who died on the fifteenth day of an attack of typhoid fever.

At the autopsy, in addition to numerous ulcers in the ileum, from which the sloughs had separated, there was recent swelling of the solitary follicles of the colon. During life there were no laryngeal symptoms noted.

The epiglottis shows at its lateral borders elongated patches over which the mucous membrane has been destroyed. The triangular ulcer on the right shows smooth quiet edges and a quite clean floor lying about one twenty-fifth of an inch beneath the level of the remaining mucous membrane. The ulcer on the left edge reaches to the tip of the epiglottis, is distinctly deeper, and shows about its centre the bare cartilage sticking out jaggedly from it. It gives the impression that over the cartilage the mucous membrane has been first cracked, and then has been retracted. There is no inflammatory reaction around it. There is nothing else of any interest in the interior of the larynx.

Plate XVIII. represents the larynx of an Elbe waterman, aged 21, who died of typhoid fever.

Up to the time of his death, on the twenty-sixth day of his illness, he had been in a marked condition of stupor, with a temperature continuously between  $104.9^{\circ}$  and  $103.2^{\circ}$ . In the last few days of life signs of passive congestion of both lungs showed themselves.

The specimen shows commencing necrosis of the mucous membrane at the tip of the epiglottis in the form of a whitish lentil-sized patch, showing no reaction around it.

The specimen has been opened along its posterior median aspect and shows a smooth-edged loss of substance two fifths of an inch long, by one-fifth of an inch broad, in the neighbourhood of the right arytenoid cartilage and leading to a smooth depression one-fifth of an inch deep. The arytenoid cartilage has entirely disappeared and no trace of it can be felt with a probe. The right vocal cord is manifestly shortened. The condition present is one of necrosis of the mucous membrane over the arytenoid cartilage, with subsequent perichondritis and separation of the necrosed arytenoid cartilage. The mucous membrane of the rest of the larynx is injected and shows at different spots desquamation of its epithelium.

Streptococci were cultivated from the deep ulcer on the right arytenoid cartilage.

The rest of the autopsy showed typhoid ulcers in the ileum, some clean and others with still adherent sloughs. Hypostatic congestion and broncho-pneumonia were present in the lower lobes of both lungs.

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## R., PLATE XIX. Decubitus Ulcer in the lower part of the Throat, involving the Cricoid Cartilage.

The specimen was obtained from a woman, aged 36, who had had a severe burn of the skin caused by an explosion of paraffin. The greater part of the skin of the abdomen and gluteal region of the right thigh and of the whole left leg was completely destroyed.

During the gradual healing of the granulating skin surface the patient emaciated very markedly and died after being nearly comatose for a week.

The specimen shows in the lower part of the pharynx, on corresponding spots on the anterior and posterior walls, an indolent ulcer the size of a shilling, with pale edges and extending through the whole depth of the mucous membrane. The cartilage of the cricoid is exposed in the floor of the ulcer on the anterior wall of the pharynx and is necrotic where it lies bare. The ulcer extends under the pharyngeal mucous membrane around the plate of the cricoid cartilage and partly loosens it from its surroundings.

The rest of the autopsy showed broncho-pneumonia, fatty degeneration of the heart, and a fatty liver.

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## R., PLATES XX. AND XXI. Syphilis of the Throat and Larynx.

The specimen was obtained from a woman, aged 38, who had unmistakable signs of tertiary syphilis. There were several large white scars adherent to the bone over the forehead and hairy scalp. The bridge of the nose was depressed and there was a large hole in the nasal septum. The glands were swollen and death occurred with symptoms of cirrhosis of the liver and ascites.

The specimen shows the following condition: The root of the tongue presents a strikingly smooth appearance on account of the disappearance of the lymphoid follicles, and shows in its middle an elongated, broad scar, running obliquely towards the epiglottis. The scar is rather depressed below the level of the surrounding tissues. On the soft palate, a little above the uvula, are two circular brown flat scars. The posterior surface of the epiglottis shows a number of trellis-like tracts formed by scar tissue; these are more evident on the right side than on the left, and have led to a puckering of the right false cord and consequent deepening of the sinus of Morgagni. The left true vocal cord is deformed. The mucous membrane of the part below the glottis shows lattice-like scars, radiating from the middle line towards the lateral walls.

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## R., PLATE XXI.

The specimen was obtained from a merchant, aged 45, who died with symptoms of marked anæmia and chronic nephritis.

Twenty-five years previously he had contracted syphilis, and in spite of repeated courses of inunction had in subsequent years suffered from several recurrences in the form of frequent ulcers in the throat and nose, also chronic pharyngeal and laryngeal catarrh. For the last fifteen years he had been very hoarse.

The autopsy showed the tongue to be quite smooth at its root from atrophy of the lymphoid follicles. In the middle of the root of the tongue was a heart-shaped ulcer the size of a shilling, having smooth, sharp edges. The epiglottis was entirely destroyed and in its place was a thick strand of scar tissue, the remains of the glosso-epiglottic fold, which coalesced with the scarred and shrunken ary-epiglottic folds.

On the right half of the posterior wall of the pharynx there was a large, markedly radiate scar. The isthmus of the fauces was much narrowed by scarring, so that the base of the uvula appeared markedly shrunken and its tip clubbed. In the interior of the larynx there was nothing particular to notice except considerable injection of the mucous membrane and thickening of the vocal cords.

The rest of the autopsy revealed fibroid degeneration of the arteries, myocarditis and waxy disease of the kidneys and spleen.



R 9.—



R 10.—



R 11.—



# TUBERCULOSIS LARYNGIS.

Gezeichnet von W. GUMMELT.







F 22.—



PHARYNGITIS GANGRÄNOSA.

F 23.—



ANGINA NECROTICANS  
IN SCARLATINA.

R 12.—



DIPHThERIA FAUCIUM, LARYNGIS, TRACHEAE.

Gezeichnet von W. GUMMELT.



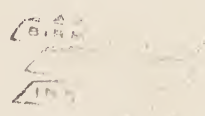




R 13.—



R 14.—



PACHYDERMIA LARYNGIS VERRUCOSA.

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R 15 und 16.—



CARCINOMA LARYNGIS.

Gezeichnet von W. GUMMELT.







R 17.—



ULCUS EPIGLOTTIDIS  
IN TYPHO.

R 18.—



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SYPHILIS PHARYNGIS ET LARYNGIS.

Gezeichnet von W. GUMMELT.







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The right of addition and alteration is reserved. Those plates marked \* have already appeared.

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2. Necrosis of the Pancreas.
3. \*Chronic interstitial Hepatitis.
4. \*Cirrhosis of the Liver.
5. \*Acute yellow Atrophy of the Liver.
6. \*Liver in Phosphorus poisoning.
7. Metastatic abscesses of the Liver.
- Suppurative Pylephlebitis.
8. Gumma of the Liver.
9. \*Syphilitic Liver in acquired Syphilis (coarsely nodular, irregular shape).
- Syphilitic Liver in Congenital Syphilis (Flinty liver).
10. Metastatic Carcinoma of the Liver.
- Metastatic Melanotic Sarcoma of the Liver.
11. Carcinoma of the Gall bladder.
12. Adenoma of the Liver.
13. Liver in Pernicious Anæmia.
14. Hydatid cyst of the Liver.
15. Waxy Liver. [Peritoneum.
16. \*Miliary Tuberculosis of the Endothelioma of the Peritoneum.
17. Metastatic deposits in the Peritoneum.
18. Tuberculosis of the Peritoneum.

## U. Urinary System.

1. \*Kidney in Cholera.
2. \*Kidney in advanced Cholera.
3. \*Adeno-sarcoma of the Kidney.
4. \*Encapsuled Adeno-sarcoma of the Kidney.
5. \*Adenoma of the Suprarenal body.
6. Embolic suppurative Nephritis.
7. Acute hæmorrhagic Nephritis.
8. Subacute Nephritis, Hæmorrhagic and non-hæmorrhagic.
9. Inflammatory fatty Kidney.
10. Large white Kidney.
11. Glomerulo-nephritis.
12. Parenchymatous nephritis.
13. Granular contracted Kidney.
- a. genuine. } shewing surface
- b. arterio-sclerotic } and Section.
14. Pyelonephritis.
15. Hydronephrosis.
16. Tubercular Kidney. [Bladder.
17. Tuberculosis of the Kidney and Metastatic Carcinoma of the Kidney
18. Cystic Kidney.
19. Waxy Kidney.
20. Cystitis, simple and diphtheritic.
21. Papilloma of the Bladder.
22. Carcinoma of the Bladder.
23. Trabeculated Bladder with Hypertrophy of the Prostate.

## K. Osseous System.

1. Osteomyelitis, purulent, two different
2. Osteomyelitis, tubercular. [cases.
- Osteomyelitis, syphilitic.
3. \*Sarcoma of the Periosteum.
4. \*Metastatic sarcoma.
5. \*Myeloid Sarcoma, central.
6. \*Red Marrow of Bone.
7. Superficial necrosis. Caries. Formation of a sequestrum.
8. Tubercular arthritis.
9. Phosphorus necrosis. [Syphilis.
10. Osteochondritis in Congenital
11. \*Bone marrow in Leukæmia. Two cases.
12. \*Medulla of the bones in Lymphadenoma.
13. Carcinoma of the Vertebrae.

## D.

## Spleen and Lymphatic glands.

1. Acute swelling of the Spleen.
2. Sago Spleen.
3. Diffuse waxy disease of the Spleen
4. Infarct in the Spleen.
5. Spleen in Leukæmia.
6. Spleen in Malaria.
7. Caseous Tubercular lymphatic gland
- Necrotic Lymphatic gland in Typhoid
- Pigmented Lymphatic gland.
- Leukæmic Lymphatic gland.
- Carcinomatous Lymphatic gland.

## G. Male Reproductive Organs.

1. Carcinoma of the Penis.
2. Suppurative Epididymitis.
3. Suppurative Orchitis.
4. Tubercular Orchitis.
5. Syphilitic Orchitis.
6. Sarcocoele, solid and cystic.

## Female Reproductive Organs.

1. Fibromyoma of the uterus.
2. Carcinoma of the uterus.
3. Menstruating uterus.
4. Tubercular salpingitis.
5. Dropsy of a Graafian follicle.
6. Cystic Adenoma of the Ovary.
7. Papilliferous cyst of the Ovary.
8. Ovarian tumour.



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ILLUSTRATIONS  
OF  
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from material in the Hamburg Hospitals

with descriptive Anatomical and Clinical text by

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Professor of Clinical Medicine, (Breslau) formerly Director of the Hamburg Town Hospitals

and

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English Edition

revised and edited

by

ARTHUR FRANCIS VOELCKER M. D. LOND. M. R. C. P.

Pathologist and Lecturer on Pathology at the Middlesex Hospital.

Second Series

PART XV.

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PART XV.

ILLUSTRATIONS OF PATHOLOGICAL ANATOMY.

Index of Sections.

C.—Circulatory Organs. K.—Bones, Muscles, and Tendons. N.—Nervous System. H.—Skin. F.—Alimentary Canal and Peritoneum. D.—Liver, Pancreas, Spleen, and Lymphatic Glands. R.—Respiratory Organs. U.—Urinary Organs. G.—Reproductive Organs. S.—Organs of Special Sense.

U., PLATES VII. AND VIII.  
Renal Tuberculosis.

PLATE VII.

The specimen was obtained from a man, aged 34, who had had urinary trouble for the previous six months, and had been seriously ill for some weeks with high fever and progressive drowsiness. During the three days he was in hospital the patient, who was diagnosed as having tubercular meningitis, passed urine which was nearly normal in quantity and specific gravity, acid, and containing only a trace of albumin. Pus corpuscles and a few tubercle bacilli were present in the urinary sediment.

The autopsy revealed general miliary tuberculosis, most marked in the cerebral and spinal meninges. There were old, partly-calcified tubercular foci in the upper lobes of both lungs. The bronchial glands were caseous.

The surface of the left kidney shows, in the middle of its anterior surface, a yellowish transparent patch the size of a shilling, projecting somewhat above the surface of the kidney. A section at right angles to the surface made through this region shows the greyish-white colour of a medullary pyramid. The pyramid and the neighbouring parts of the cortex are seen (U., Plate VII.) to be completely infiltrated with caseous material. The healthy kidney substance is separated by a red zone from the infiltrated portion, which is softened in its centre and towards the renal pelvis. The softened dirty-grey masses have been partly discharged into the pelvis of the kidney, the mucous membrane of which is thickened, markedly injected, and greyish-green in colour.

At the junction of the pelvis and ureter is a large ulcer, in the floor of which some grey granulations are seen extending into the ureter.

The ureter itself is dilated, and converted into a rigid tube; its mucous membrane, right down to the bladder, is beset with tubercular ulcers, the edges of which are markedly injected. The vesical opening of the left ureter (indicated by a probe) is infiltrated with caseous material and ulcerated. The mucous membrane of the bladder shows marked injection, and several superficial ulcers with ragged floors.

The right kidney and ureter, and the mucous membrane of the urethra, were healthy.

PLATE VIII.

The specimen was obtained from a woman, aged 27, who for about two years previously had had bladder trouble, consisting in pain on micturition and dribbling of urine. The urine was cloudy, and from time to time contained blood. Treatment by internal medication and washing out of the bladder were followed by no improvement, and later on the patient had frequent paroxysmal attacks of pain in the loins.

On examination the patient was considerably emaciated, and there was irregular pyrexia, the temperature reaching  $101.3^{\circ}$  F. There were no abnormal signs in the lungs; there was tenderness on pressure over the left kidney, which was felt, under an anæsthetic, to be enlarged. The urine was cloudy, acid, and deposited a sediment consisting of flocculent pus, but when filtered the filtrate contained only a trace of albumin. Microscopical examination showed advanced fatty degeneration of the pus corpuscles, and an occasional decolorized red corpuscle. There was some renal epithelium, but no casts. Tubercle bacilli were found after repeated examinations.

In June, 1892, Professor Schede performed nephrectomy by the extra-peritoneal operation. The perinephritic tissue was found thickened, but free from abscesses. The kidney, which was readily shelled out from its thickened capsule, was not enlarged. It had the feel of a flabby sac, and showed on its surface several irregular yellow nodules, some as large as a sixpenny-piece. The kidney on section (Plate VIII.) is seen to consist of a series of cavities communicating with one another, and with the renal pelvis. The walls of the cavities are lined with caseous confluent masses, though here and there septa of a reddish-grey colour are seen separating these masses. The mucous membrane of the renal pelvis presents similar appearances. There is only an extremely small amount of kidney substance left just beneath the renal capsule, and this can be recognised at the lower pole of the kidney, and is itself riddled with caseous foci.

The patient rapidly recovered from the operation, and gained 24 lb. in weight. Cystitis continued for two months, but in 1897 the patient was alive and quite well.



## U., PLATES IX. AND X.

### Cystic Kidney.

The specimen was obtained from a labourer's wife, aged 42, who had suffered as a child from cough and expectoration of blood. When 15 years old she had an attack of small-pox, and later on had frequent attacks of gastric trouble. When 33 years of age, she had a severe attack of rheumatic fever, in which her heart became affected, and evidences of this were present a year later.

When 36 years old, in the summer of 1888, she was admitted to the hospital on account of palpitation, pain in the chest, and shortness of breath. She was repeatedly under hospital treatment from this time till her death in March, 1894.

Mitral regurgitation was diagnosed on admission, and in 1890 an aneurism of the ascending aorta was detected, and later on there were symptoms of myocarditis and grave failure of compensation.

The patient improved rapidly each time under treatment, and in the intervals of her attacks felt quite well, so that she married again in 1892. There were never any clinical evidences of renal disease, although in 1893 it was noted that the left kidney was distinctly enlarged, and tender on pressure. Even three months before her death, which took place quite suddenly, the urine, after compensation had improved, was normal in amount and character, the average daily amount (during ten days) being 1510 c.c., specific gravity 1013·6.

At the autopsy an aneurism of the ascending aorta, and advanced sclerosis of the larger vessels, were found. The heart was dilated, its muscle hypertrophied, and showed myocarditis, resulting from sclerosis of the coronary arteries.

The left kidney is seen (U., Plate IX.) to be enlarged. It measures  $8 \times 3\frac{3}{8} \times 2\frac{1}{8}$  inches ( $20 \times 9 \times 5\cdot5$  cm.). The surface is covered with globular cysts varying in size from a pea to a hen's egg. At each pole the cysts are as close together as grapes on a bunch, and their yellowish or bluish contents, seen through the transparent walls, give them a close resemblance to a bunch of grapes. The contents of the cysts are quite clear, some being darker from the presence of blood-colouring matter.

On section (U., Plate X.), both the cortex and the medullary portion are riddled with numerous smooth-walled cavities of varying size. There are seen, however, in the central part and towards the pelvis of the kidney, portions of apparently normal renal substance.

The pelvis of the kidney is dilated, and much injected. The ureter and vessels are quite natural.

The right kidney was somewhat smaller than the left, and measured  $5 \times 2\frac{1}{2} \times 1\frac{3}{8}$  inches ( $12\cdot5 \times 7 \times 4$  cm.), but in other respects closely resembled it, though the cysts were rather smaller.

Microscopical examination showed a series of spherical cavities of various sizes, the walls of which were lined with a well-marked layer of epithelial cells. These spaces corresponded to dilatations of the convoluted tubules. The smallest of these cavities was approximately the size of a normal renal tubule. The renal tissue between the cysts showed, especially in the more central portion of the cortex, but little change.

The glomeruli, apart from a slight thickening of the capsule and a few scattered patches of sclerosis, were conspicuously free from change. The medullary portion of the kidney showed a moderate overgrowth of the interstitial tissue.

---

## U., PLATE XI.

### Metastatic Carcinomatous Deposits in the Kidney.

The specimen was obtained from a man, aged 60 years, who died with carcinoma of the œsophagus. The primary growth was a squamous epithelioma situated in the lower third of the œsophagus, and had undergone softening and invaded the left pleura and lung. There were very numerous metastatic deposits in all the organs, especially in the skin, where they reached the size of a hen's egg; smaller deposits were found in the pleuræ, lungs, heart, intestine, retro-peritoneal glands, liver, and spleen.

Both kidneys (Plate XI.) are riddled with yellowish-white nodules, some as large as a shilling, which project slightly above the surface of the kidney, and show a delicate network of vessels. Some of the nodules have softened in the centre, so that the surface is umbilicated. There is no inflammation around the nodules. The kidney substance, with the exception of slight injection of the medullary portion, is pale, but otherwise natural. During life the urine was free from albumin.

---

## U., PLATE XII.

### Renal Infarct.

The specimen was obtained from a man, aged 39, who had suffered for fifteen years with aortic regurgitation, following an attack of rheumatic fever. For the last three weeks of his life he had evidences of repeated infarction in the lungs, and he died of heart failure. In the five days preceding his death a small quantity of albumin and blood appeared in the urine, which had previously been free from them. Microscopical examination of the urine showed red blood corpuscles and a few renal epithelial cells.

At the autopsy the following condition was found: Hypertrophy and marked dilatation of the left ventricle; retraction and partial adhesion, with consequent incompetence, of the aortic valves; old calcified and recent fibrinous deposits on the free edges of the valves, and a large thrombus extending from the right auricular appendix into the auricle; numerous old and recent infarcts in the lungs. The kidneys were rather swollen and very vascular.

In the left kidney (Plate XII.) are seen two anæmic infarcts lying close to one another; they are surrounded by an intensely hyperæmic zone. On section the infarcts are of a uniform pale yellow colour and of the consistence of clay. They extend from the medullary portion, widening out towards the cortex and forming two truncated cones.



Microscopical examination showed marked parenchymatous changes in the projecting ivory-white patches; the renal epithelium was cloudy, fattily degenerated and breaking down, the nuclei in part no longer taking the stain. Besides this were found in this part abundant small-celled infiltrations distributed around the bloodvessels. The retracted red portions were characterized by abundant development of connective tissue. The capsules of the glomeruli showed concentric thickening, some were completely destroyed; the renal tubules had mostly lost their epithelium, and were atrophied, and in a few tubules only a layer of small epithelial cells remained. There was hardly any trace of small celled infiltration.

The rest of the autopsy revealed calcified foci in the apices of both lungs, myocarditis, and typical albuminuric retinal changes.

---

## U., PLATE XVIII.

### Uratic Renal Infarcts in a New-born Child.

The kidney was obtained from a child five days old, who died from general debility.

The organ is of normal size, and shows on section a cortex of normal and uniform thickness. In most of the medullary pyramids, especially in the lower half, are a number of yellowish-red streaks lying close together and converging towards the tip of each papilla. These streaks were found, on microscopical examination, to be due to a deposit of a finely granular yellow sediment (urates) in the straight and collecting tubules of the kidney.

---

## U., PLATE XIX.

### Calcareous Renal Infarcts.

The specimen was obtained from a man, aged 70 years, who died from myocarditis and general atheroma. The urine during life had presented nothing abnormal.

The surface of the kidney (Plate XIX.) shows a slightly granular appearance and some deeper scars. On section the cortex has a washed-out look, and is of irregular thickness, cloudy and of a red-grey colour. The medullary pyramids present two layers, one at the basal portion, streaked alternately light and dark, and the other, comprising nearly the apical half of the pyramid, a pure white streaked layer extending up to the apex of the papilla. The white streaks proved, on microscopical examination, to consist of fine concretions of phosphate and carbonate of lime, occupying the tunica propria of the straight tubules.

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## U., PLATE XX.

### Congested Kidney in a New-born Child.

The specimen was obtained from the body of a markedly cyanosed child, who died during delivery. All the organs presented the appearances of marked venous congestion, and there were multiple subserous ecchymoses, some as large as a split pea. The lungs were airless. The kidney (Plate XX.) shows marked foetal lobulation. On section the purple-coloured medullary pyramids are seen sharply marked off from the uniformly bright red cortex. The purple coloration obtains throughout the whole of the medullary pyramids, and is seen on close examination to be produced by the intense injection of the veins, and extends up to the junction of the cortex and medulla.

---

## U., PLATE XXI.

### Waxy Disease of the Kidney.

The specimen was obtained from a maidservant, aged 33, who died with suppurating tubercular disease of several bones, and pulmonary tuberculosis. She had had the bone disease for eight years, and had undergone several operations for it. The pulmonary tuberculosis had been noticed for the last two years, and she had been confined to bed and under hospital treatment for the last three months. While in hospital the urine, which always contained albumin, measured 1200 to 1500 c.c., specific gravity 1010 to 1015, acid, quite clear, golden yellow in colour, 3 to 5 per cent. albumin (Esbach). Microscopical examination showed an occasional pale cast and a few renal epithelial cells. Towards the end the urine was more scanty and cloudy.

At the autopsy the kidney presented the following appearance (Plate XXI.).

The capsule is thin and strips readily. The kidney is notably enlarged and firm. It measures  $5\frac{1}{2} \times 2\frac{1}{2} \times 2$  inches ( $13 \times 7 \times 5$  cm.). The surface is smooth, and nearly uniformly greyish-white in colour. On section the cortex is thickened, very pale, of a yellowish-white colour, and mottled. The glomeruli are very pale, but not very evident. The medullary portion is very much injected, and with its bright red streaks presents a marked contrast to the pale white cortex (large white waxy kidney or waxy fatty kidney).



When a solution of iodine and then diluted sulphuric acid are dropped on to the cut surface of the kidney after carefully washing it with water, there appear, as is shown in the plate at the lower pole of the kidney and to the right of the observer, in the cortex numerous dark brown spots and small streaks, which correspond to the waxy disease of the glomerular vessels and small arteries ; while in the medullary portion there are seen thicker brown streaks converging to the renal pelvis, and corresponding to waxy disease of the vasa recta.

Microscopical examination showed the glomerular tufts and vasa afferentia of the cortex to be filled with a homogeneous semi-translucent material which gave a marked waxy reaction. The epithelium of the glomeruli was present, and showed no appreciable change, but the epithelium of the convoluted tubules showed distinct general fatty change. In the medullary portion only the middle coat of the vasa recta was affected. The rest of the autopsy revealed waxy disease of the spleen, liver, and intestines. The heart was not hypertrophied, and there were no retinal hæmorrhages.

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## U., PLATE XXII.

### Multiple Embolic Renal Abscesses.

The specimen was obtained from a boy, aged 12, who died with infective endocarditis. The clinical history of the case is not known. At the autopsy very numerous small emboli were found in nearly all the organs, as well as in the skin.

The kidney (Plate XXII.) is considerably enlarged and swollen, the surface is tense and very vascular, and covered with numerous yellowish spots, some as large as a pin's head and mostly circular in form ; they are surrounded by a well-marked dark red zone. On section the spots had a rather elongated form, and showed partial softening, which was especially well seen in the case of the larger ones. The cortex was swollen and cloudy, and both it and the medullary portion were unduly vascular.

Microscopical examination showed that the yellow spots corresponded to necrotic kidney tissue, which was thickly infiltrated with round cells. The bloodvessels of the necrotic areas were distended with masses of bacteria, which had also to some extent spread into the necrosed tissue. The vascular tufts of the glomeruli showed the most marked distension with micrococci, and were thus in the centre of the necrotic foci. In the neighbourhood of the latter the vessels showed marked injection, and here and there some extravasation. Pure cultures of streptococci were obtained from the ulcerated portion of the mitral valve as well as from the suppurating foci in the kidneys.



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U. 8.—

This anatomical illustration, labeled 'U. 8.—', depicts a dissected organ, possibly a kidney, with a long, segmented duct. The organ is shown in a cross-section, revealing internal structures such as the renal cortex, medulla, and pelvis. The duct is long and segmented, with a series of small, rounded openings along its length. The illustration is rendered in a detailed, scientific style, with various colors used to highlight different tissues and structures. A thin, dark line, likely a needle or probe, is shown passing through the organ and the duct, indicating the point of dissection.

Gezeichnet von W. GUMMELT.







U. 9.—

U. 10.—

6. 11. 1891  
L. 11. 1891  
L. 11. 1891



REN CYSTICUM.



U. 11.—

U. 12.—



METASTASES CARCINOMATOSAE RENIS.



INFARCTUS RENIS.

Gezeichnet von W. GUMMELT.







U. 13.—

U. 14.—



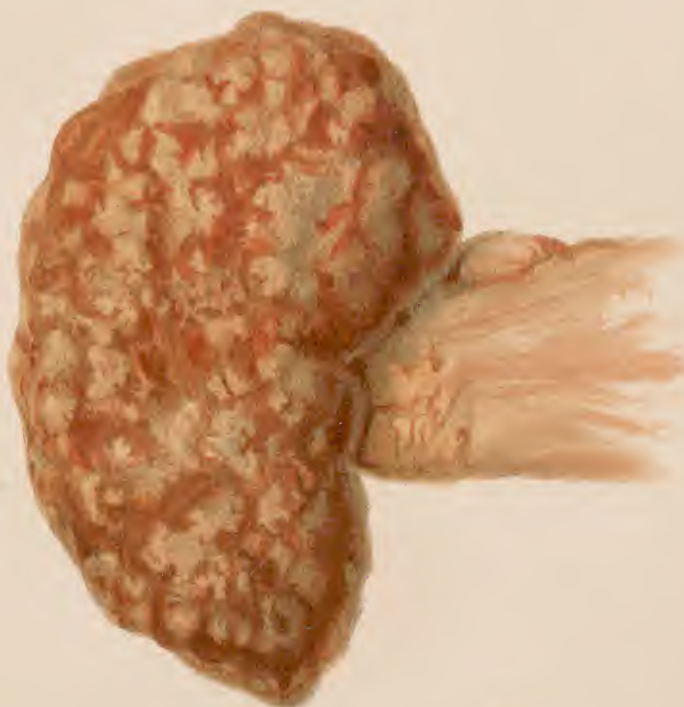
*Handwritten note:*  
Nephritis parenchymatosa chronica  
Lupus



NEPHRITIS PARENCHYMATOSA CHRONICA.

U. 15. u. 16.—

U. 17.—



ATROPHIA RENUM GRANULARIS.

Gezeichnet von W. GUMMELT.





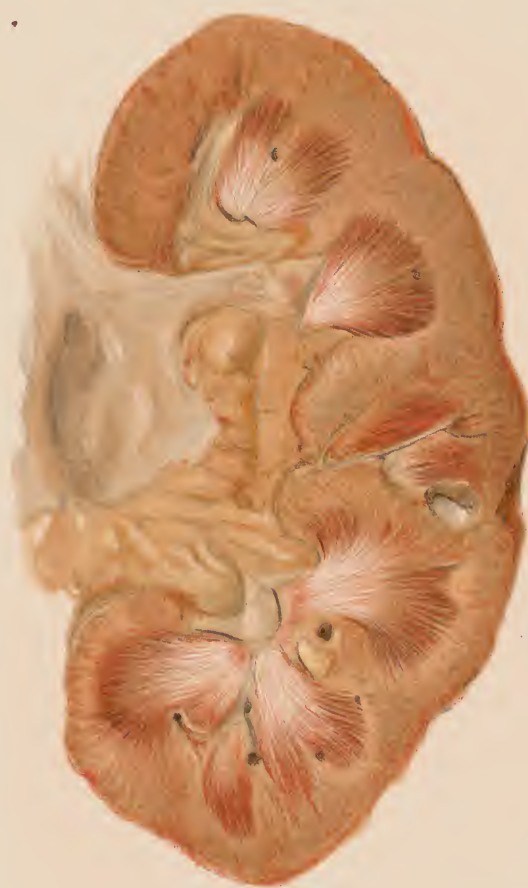


U. 18.—



INFARCTUS URICUS.

U. 19.—



INFARCTUS CALCAREUS.

U. 20.—



REN CYANOTICUM.

U. 21.—



DEGENERATIO RENIS AMYLOIDEA.

U. 22.—



ABSCESSUS RENIS EMBOLICI.

Gezeichnet von W. GUMMELT.







# Contents of the Complete Work.

The right of addition and alteration is reserved. Those plates marked \* have already appeared.

## C. Circulatory Organs.

1. Pericarditis. Shaggy heart.
2. \*Myocarditis with scars.
3. Aneurysm of the heart.
4. Aneurysm of a valve.
5. Atheroma of the Aorta.
6. \*Dissecting Aneurysm.
7. Aortic Stenosis and Incompetence.
8. Mitral Stenosis and Incompetence.
9. \*Warty Endocarditis.
10. \*Vegetative Endocarditis.
11. \*Ulcerative Endocarditis.
12. Fatty heart.
13. \*Softening of the Myocardium from Thrombosis.
14. \*Aneurysm of the Aorta.

## F. Alimentary Canal.

1. \*Metastatic Sarcoma of the intestine.
2. \*Typhoid stage of swelling.
3. \*Typhoid stage of ulceration.
4. \*Typhoid stage of ulceration.
5. \*Typhoid stage of necrosis.
6. \*Intestine in Cholera.
7. \*Cholera, croupous enteritis.
8. \*The serous coat of the gut in Cholera.
9. \*Carcinoma of the Duodenum.
10. \*Stricture of the Œsophagus.
11. \*Sulphuric acid poisoning.
12. \*Œsophageal varicose veins.
13. \*Accessory thyroid gland in the Tongue.
14. \*Melanotic pigmentation of the Duodenum.
15. \*Gangrene of the soft Palate.
16. Diphtheria of Pharynx and Tonsils.
17. Thrush.
18. Acute Dysentery.
19. Subacute or chronic stage of Dysentery.
20. Carcinoma of the Œsophagus.
21. \*Carcinoma of the Pylorus.
22. \*Gastric ulcer.
23. Syphilitic scars of the Palate.
24. Decubitus ulceration of the Larynx.
25. \*Carcinoma of the fundus of the Stomach.
26. Perforation of the Vermiform appendix with Perityphlitis.
27. \*Carcinoma of the Rectum.
28. Caseous follicle in the Intestine.
29. Tubercular ulceration of the Intestine.
30. \*Chronic gastric catarrh.
31. Diphtheria of the Œsophagus.

## R. Circulatory Organs.

1. \*Ulcerating Pulmonary Tuberculosis.
2. Œdema of the glottis.
3. Ulceration of the larynx in Typhoid.
4. \*Larynx in Leprosy.
5. Tuberculosis of the Larynx.
  - a. Tubercular ulcers.
  - b. Miliary tubercle.
6. Papilloma and Carcinoma of the Larynx.
7. Perichondritis.
8. Membranous laryngitis and tracheitis.
9. Syphilitic Larynx and Trachea.
10. Rhinoscleroma.
11. Compression of the Trachea by a
12. Another form of goitre. [goitre.
13. Plastic Bronchitis.
14. Tuberculosis of the Bronchi.
15. \*Atrophic and hypertrophic walled Bronchiectasis.
16. \*Carcinoma of the Bronchi.
17. Hæmorrhagic infarct of the Lung.
18. Hypostatic congestion and œdema of the Lung.
19. Croupous Pneumonia with Pleurisy
- Red and grey hepatization

## R. Circulatory Organs.

20. Catarrhal Pneumonia in a child
  - a. recent
  - b. older confluent stage.
21. \*Inhalation Pneumonia
  - a. recent
  - b. with suppuration & gangrene.
22. Pneumonia from inhalation of dust.
  - a. From a stone Mason
  - b. From a Collier.
23. Metastatic abscess in the Lung.
24. \*Chronic caseous pneumonia with recent tubercle of the lymphatics.
25. Carcinoma with scars in the neighbourhood.
26. Emphysema of the Lungs.
27. Atelectasis from Obstruction.
  - Atelectasis from Compression.
28. Desquamative Pneumonia Tubercular.
29. White Pneumonia in Syphilis. [culosis
30. \*Primary Carcinoma of the Lung.
- \*Miliary metastatic carcinomatous nodules in the lung.
31. Miliary Tuberculosis of the Pleura.

## N. Nervous System.

1. \*Tubercular Meningitis.
2. \*Purulent Meningitis.
3. Tumour of the Dura mater and one of the Pia mater.
4. Porencephaly. Two cases.
5. Solitary Tubercle of the Brain.
- Gumma of the Brain.
6. Glioma of the Brain.
7. \*Sarcoma of the Brain. [stages.
8. Cerebral Softening. Red and yellow
9. Apoplexy. Recent and old apoplectic
10. Disseminated Sclerosis. [Cysts.
11. Leptomenigitis in General Paralysis.
12. Syringomyelia. [lysis.
13. Tabes, posterior surface of cord.
14. Tumour of the Spinal meninges.
15. Hypertrophic Spinal Pachymeningitis.
16. Chronic tubercular Pachymeningitis and Leptomenigitis.
17. Transverse sections of the cord in
  - a. Disseminated Sclerosis.
  - b. Infantile Paralysis.
  - c. Amyotrophic Lateral sclerosis.
  - d. Tabes dorsalis.
  - e. Spinal paralysis.
- Including magnified views of sections stained after Weigert's method.
18. Multiple Fibromata of the Nerves.
19. Leprous nodules on Nerves.
20. \*Internal Hydrocephalus.

## F. D. Liver, Pancreas and Peritoneum.

1. Cyst of the Pancreas.
2. Necrosis of the Pancreas.
3. \*Chronic interstitial Hepatitis.
4. \*Cirrhosis of the Liver.
5. \*Acute yellow Atrophy of the Liver.
6. \*Liver in Phosphorus poisoning.
7. Metastatic abscesses of the Liver.
- Suppurative Pylephlebitis.
8. Gumma of the Liver.
9. \*Syphilitic Liver in acquired Syphilis (coarsely nodular, irregular shape).
- Syphilitic Liver in Congenital Syphilis (Flinty liver).
10. Metastatic Carcinoma of the Liver.
- Metastatic Melanotic Sarcoma of the Liver.
11. Carcinoma of the Gall bladder.
12. Adenoma of the Liver.
13. Liver in Pernicious Anæmia.
14. Hydatid cyst of the Liver.
15. Waxy Liver. [Peritoneum.
16. \*Miliary Tuberculosis of the Endothelioma of the Peritoneum.
17. Metastatic deposits in the Peritoneum
18. Tuberculosis of the Peritoneum.
19. Tuberculosis of the Peritoneum.

## U. Urinary System.

1. \*Kidney in Cholera.
2. \*Kidney in advanced Cholera.
3. \*Adeno-sarcoma of the Kidney.
4. \*Encapsuled Adeno-sarcoma of the Kidney.
5. \*Adenoma of the Suprarenal body.
6. Embolic suppurative Nephritis.
7. Acute hæmorrhagic Nephritis.
8. Subacute Nephritis, Hæmorrhagic and non-hæmorrhagic.
9. Inflammatory fatty Kidney.
10. Large white Kidney.
11. Glomerulo-nephritis.
12. Parenchymatous nephritis.
13. Granular contracted Kidney.
  - a. genuine. } shewing surface
  - b. arterio-sclerotic } and Section.
14. Pyelonephritis.
15. Hydronephrosis.
16. Tubercular Kidney. [Bladder.
17. Tuberculosis of the Kidney and
18. Metastatic Carcinoma of the Kidney
19. Cystic Kidney.
20. Waxy Kidney.
21. Cystitis, simple and diphtheritic.
22. Papilloma of the Bladder.
23. Carcinoma of the Bladder.
24. Trabeculated Bladder with Hypertrophy of the Prostate.

## K. Osseous System.

1. Osteomyelitis, purulent, two different
2. Osteomyelitis, tubercular. [cases.
- Osteomyelitis, syphilitic.
3. \*Sarcoma of the Periosteum.
4. \*Metastatic sarcoma.
5. \*Myeloid Sarcoma, central.
6. \*Red Marrow of Bone.
7. Superficial necrosis. Caries. Formation of a sequestrum.
8. Tubercular arthritis.
9. Phosphorus necrosis. [Syphilis.
10. Osteochondritis in Congenital
11. \*Bone marrow in Leukæmia. Two cases.
12. \*Medulla of the bones in Lymphadenoma.
13. Carcinoma of the Vertebrae.

## D.

## Spleen and Lymphatic glands.

1. Acute swelling of the Spleen.
2. Sago Spleen.
3. Diffuse waxy disease of the Spleen.
4. Infarct in the Spleen.
5. Spleen in Leukæmia.
6. Spleen in Malaria.
7. Caseous Tubercular lymphatic gland
- Necrotic Lymphatic gland in Typhoid
- Pigmented Lymphatic gland.
- Leukæmic Lymphatic gland.
- Carcinomatous Lymphatic gland.

## G. Male Reproductive Organs.

1. Carcinoma of the Penis.
2. Suppurative Epididymitis.
3. Suppurative Orchitis.
4. Tubercular Orchitis.
5. Syphilitic Orchitis.
6. Sarcocoele, solid and cystic.

## Female Reproductive Organs.

1. Fibromyoma of the uterus.
2. Carcinoma of the uterus
3. Menstruating uterus.
4. Tubercular salpingitis.
5. Dropsy of a Graafian follicle.
6. Cystic Adenoma of the Ovary.
7. Papilliferous cyst of the Ovary
8. Ovarian tumour.



# Journal of the Expedition to the North Pole

By Dr. J. A. Smith, U.S.N., and  
Lieut. J. B. Jones, U.S.N.

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The first English translation of this rare and impressively illustrated patho-anatomical atlas was published in parts for subscribers. Twelve parts were originally planned, hence parts 13-15, comprising the 'Second Series' are revised and edited by Arthur Francis Voelcker, MD, MRCP. Part 13 contains a prefatory sheet (dated 1896) to the Second Series with acknowledgements by Rudolph Virchow and Dr. Ernst Ziegler.

Kast (1856-1903), a German internist, was instrumental in introducing Phenacetin (G & M 1883.3) and the sulphonal group of drugs (G & M1884) into medicine. His co-author Theodor Rumpel (1862-1923), was a German surgeon who is remembered for describing the Rumpel-Leede sign. He also oversaw the building of the Barmbecker Krankenhaus in Hamburg, and became its director in 1913.

The editor Sir Marc Armand Ruffer (1859-1917,) was an Anglo-German experimental pathologist and bacteriologist. He is considered a pioneer of modern paleopathology. In 1891 he was appointed the first director of the British institute of Preventative Medicine, latterly the Lister Institute. £1850